

Dated 11/20/2018

Services Subcontract Form of Agreement

Subcontractor: *

Subcontract No.: *

Address: *

Contact: *

Telephone: *

Facsimile: *

E-mail: *

D-U-N-S No.: *

NAICS Code:

334112

This subcontract, effective on the date of signature by the last party to sign, is hereby made and entered into by and between Triad National Security, LLC (CONTRACTOR), and the above named SUBCONTRACTOR who hereby agree that all Work specified below, which is a portion of the goods and services to be provided by CONTRACTOR for the United States Department of Energy National Nuclear Security Administration (OWNER), shall be performed by the SUBCONTRACTOR in accordance with all the provisions of this subcontract.

1. SUBCONTRACT DOCUMENTS: This subcontract consists of the following documents:
 - Subcontract Form of Agreement [Dated 11/20/2018]
 - LFS Appendix SFA-1, FAR & DEAR Clauses Incorporated By Reference (Rev. 10.0, 11/1/18), is incorporated by reference as if fully set forth and may be found at <http://www.lanl.gov/business/vendors/terms-conditions.php>
 - LFS Exhibit "A" General Conditions (Rev. 9.0, 11/1/18), is incorporated by reference as if fully set forth and may be found at <http://www.lanl.gov/business/vendors/terms-conditions.php>
 - Exhibit "B" Special Conditions [Dated 11/20/2018]
 - Exhibit "C" Form A Schedule of Quantities and Prices [Dated 11/20/2018]
 - Exhibit "C" Form B Milestone Payments Schedule [Dated 11/20/2018]
 - Exhibit "D" Scope of Work and Technical Specifications [Dated TBD]
 - Exhibit "F" Environmental, Safety and Health Requirements [Dated February 2018]
 - Exhibit "G" Cyber Security Requirements [Dated 11/2018]
 - Exhibit "G" Security Requirements [Dated 6/22/18]
 - Exhibit "H" Quality Assurance Requirements [Dated 7/12/18]
2. WORK TO BE PERFORMED (Work): In accordance with the subcontract documents, SUBCONTRACTOR shall furnish all administrative, technical and professional services, and perform all operations, including the furnishing and supervision of all technical personnel and labor, and the furnishing of any equipment, material, tools, supplies and transportation necessary and required to satisfactorily perform the Work in accordance with Exhibit "D" Scope of Work and Technical Specifications:
3. SCHEDULE: The Work shall be performed in accordance with the dates set forth in the Exhibit "B" clause titled "COMMENCEMENT, PROGRESS AND COMPLETION OF THE WORK."
4. COMPENSATION: As full consideration for the satisfactory performance by SUBCONTRACTOR of this subcontract, CONTRACTOR shall pay to SUBCONTRACTOR the total sum of * (\$*), in accordance with the prices set forth in Exhibit "C" and with the payment provisions of this subcontract.

Dated 11/20/2018

5. JOINT VENTURE: In signing this subcontract as a Joint Venture comprised of *, *, and *, the parties agree that they shall be jointly and severally obligated to CONTRACTOR to fulfill all the SUBCONTRACTOR'S obligations and responsibilities set forth herein.

This subcontract embodies the entire agreement between CONTRACTOR and SUBCONTRACTOR and supersedes all other writings. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding not set forth herein.

For the CONTRACTOR:

For the SUBCONTRACTOR:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Revised 1/16/19

Appendix SFA-1

FAR & DEAR Clauses Incorporated By Reference

- (a) The Federal Acquisition Regulation (FAR) and the Department of Energy Acquisition Regulation (DEAR) clauses which are incorporated by reference herein shall have the same force and effect as if printed in full text.
- (b) Full text of the referenced clauses may be accessed electronically by copying and pasting the appropriate URL address in your web browser:
- | | |
|-------------------|---|
| FAR clauses: | https://www.acquisition.gov/browse/far/52 |
| DEAR 952 clauses: | https://www.ecfr.gov/cgi-bin/text-idx?SID=838834e575ead9ec27ea415e492b42ee&mc=true&tpl=/ecfrbrowse/Title48/48cfr952_main_02.tpl |
| DEAR 970 clauses: | https://www.ecfr.gov/cgi-bin/text-idx?SID=838834e575ead9ec27ea415e492b42ee&mc=true&tpl=/ecfrbrowse/Title48/48cfr970_main_02.tpl |
- (c) The following alterations shall apply to FAR and DEAR clauses wherever necessary to make the context of the unmodified FAR and DEAR clauses applicable to this subcontract.
- (1) The term "Contractor" shall mean "SUBCONTRACTOR;"
 - (2) The term "Contract" shall mean this subcontract; and
 - (3) The term "DOE", "Government," "Contracting Officer" and equivalent phrases shall mean CONTRACTOR and/or CONTRACTOR'S representative, except the terms "Government" and "Contracting Officer" do not change:
 - (i) In the phrases "Government Property," "Government-Furnished Property," and "Government-Owned Property,"
 - (ii) In any patent clauses incorporated herein;
 - (iii) When a right, act, authorization or obligation can be granted or performed only by the Government or the prime contract Contracting Officer or his duly authorized representative;
 - (iv) When title to property is to be transferred directly to the Government;
 - (v) When access to proprietary financial information or other proprietary data is required except for authorized audit rights; and
 - (vi) Where specifically modified herein.
 - (4) For authorized audit rights, the term "Contracting Officer or an authorized representative of the Contracting Officer" shall also include "CONTRACTOR, or an authorized representative of CONTRACTOR."
- (d) Each of the individual FAR/DEAR clauses listed below is incorporated by reference into this subcontract when the condition(s) for applicability is/are met.

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THE FOLLOWING CLAUSES APPLY TO THIS SUBCONTRACT REGARDLESS OF THE AMOUNT OF THE SUBCONTRACT PRICE, UNLESS OTHERWISE NOTED:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.203-18	Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements or Statements - Representation - (Jan 2017)	Solicitation Provision that applies in all solicitations, except in solicitations for a personal services subcontract with an individual if the services are to be performed entirely by the individual.
FAR 52.203-19	Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017)	Applies in all solicitations and resultant subcontracts, other than personal services subcontracts with individuals.
FAR 52.204-23	Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (Jul 2018)	
FAR 52.215-22	Limitations on Pass-Through Charges -- Identification of Subcontract Effort (Oct 2009)	Applies if subcontractor intends to subcontract to a lower-tier subcontractor more than 70 percent of the total cost of work to be performed under its subcontract.
FAR 52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation (May 2014)	Applies to subcontracts that may require or involve the employment of laborers and mechanics. When applicable, only paragraphs (a) through (d) apply to subcontracts. Furthermore, if applicable, SUBCONTRACTOR shall flow down paragraphs (a) through (d) to all its lower-tier subcontracts that may require or involve the employment of laborers and mechanics.
FAR 52.222-50	Combating Trafficking In Persons (Mar 2015)	Applies in all subcontracts and in all contracts with agents (as defined in FAR 52.222-50). The requirements in paragraph (h) of this clause apply only to any portion of a subcontract that— (A) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and (B) Has an estimated value that exceeds \$500,000.
FAR 52.222-62	Paid Sick Leave Under Executive Order 13706 (Jan 2017)	Applies in subcontracts for commercial items, as that term is defined in FAR subpart 2.101.
FAR 52.223-3	Hazardous Material Identification and Material Safety Data (Jan 1997) Alternate I (Jul 1995)	Applies if subcontract involves delivery of hazardous materials as defined in FAR subpart 23.301. If applicable, the term "Government" as used in this clause means "CONTRACTOR and the Government."
FAR 52.223-5	Pollution Prevention And Right-To-Know Information (May 2011) Alternate I (May 2011)	Applies in solicitations and subcontracts that provide for performance, in whole or in part, at LANL.
FAR 52.223-10	Waste Reduction Program (May 2011)	Applies only when work will be performed on site at LANL.
FAR 52.223-12	Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners (Jun 2016)	Applies in solicitations and subcontracts for services when the subcontract includes the maintenance, service, repair, or disposal of: (i) Refrigeration equipment, such as refrigerators, chillers, or freezers; or (ii) Air conditioners, including air conditioning systems in motor vehicles.
FAR 52.225-13	Restrictions on Certain Foreign Purchases (Jun 2008)	
FAR 52.225-26	Contractors Performing Private Security Functions Outside The United States (Oct 2016)	Applies in all subcontracts for commercial items that will be performed outside the United States in areas of— (1) Combat operations, as designated by the Secretary of Defense; or (2) Other significant military operations, upon agreement of the Secretaries of Defense and State that the clause applies in that area.
FAR 52.227-3	Patent Indemnity (Apr 1984)	Applies in subcontracts that may result in the delivery of commercial items, as that term is defined in 48 CFR subpart 2.1.
FAR 52.227-23	Rights to Proposal Data (Technical) (Jun 1987)	Applies if subcontract is based on consideration of a technical proposal.

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THE FOLLOWING CLAUSES APPLY TO THIS SUBCONTRACT REGARDLESS OF THE AMOUNT OF THE SUBCONTRACT PRICE, UNLESS OTHERWISE NOTED:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.228-5	Insurance—Work on a Government Installation (Jan 1997)	Applies in subcontracts that require work on a Government installation.
FAR 52.232-39	Unenforceability of Unauthorized Obligations (Jun 2013)	
FAR 52.244-6	Subcontracts for Commercial Items (Jan 2017)	
FAR 52.245-1	Government Property (Jan 2017)	Applies to (1) fixed-price solicitations and subcontracts when CONTRACTOR will provide Government property; and (2) subcontracts for the acquisition of commercial items where Government property that exceeds \$150,000 is furnished or where SUBCONTRACTOR is directed to acquire property for use under the subcontract that is titled in the Government.
FAR 52.245-1	Government Property (Jan 2017) Alternate I (Apr 2012)	Applies if subcontract is <u>not</u> a : (1) cost reimbursement, (2) time-and-material, (3) labor-hour, or (4) fixed-price awarded on the basis of submission of certified cost or pricing data.
FAR 52.245-2	Government Property Installation Operation Services (Apr 2012)	Applies in fixed-price subcontracts to be performed at LANL when CONTRACTOR-furnished property will be provided for initial provisioning only and CONTRACTOR is not responsible for repair or replacement.
FAR 52.245-9	Use and Charges (Apr 2012)	Applies when FAR 52.245-1 is applicable.
FAR 52.247-63	Preference for U.S.-Flag Air Carriers (Jun 2003)	Applies if performance of subcontract may involve international air transportation.
FAR 52.247-64	Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006)	Applies unless exempted by paragraph (e)(4) of FAR 52.247-64.
FAR 52.249-2	Termination for Convenience of the Government (Fixed-Price) (Apr 2012)	Paragraph (d) is deleted; the period for submitting the subcontractor's termination settlement proposal in paragraph (e) is reduced to 6 months; and the period for submitting the subcontractor's request for equitable price adjustment in paragraph (l) is reduced to 45 days.
FAR 52.249-8	Default (Fixed-Price Supply and Service) (Apr 1984)	
DEAR 952.203-70	Whistleblower Protection For Contractor Employees (Dec 2000)	Applies to subcontracts involving work performed on behalf of DOE directly related to activities at DOE-owned or leased sites.
DEAR 952-204-71	Sensitive Foreign Nations Controls (Apr 1994)	Applies if SUBCONTRACTOR may make unclassified information about nuclear technology available to certain sensitive foreign nations. When applicable, contact CONTRACTOR to get a list of Sensitive Foreign Nations.
DEAR 952.208-70	Printing (Apr 1984)	
DEAR 952.250-70	Nuclear Hazards Indemnity Agreement (Aug 2016)	Applies only if performance of subcontract may involve the risk of public liability, as that term is defined in the Atomic Energy Act of 1954, as amended, with the additional conditions described in DEAR 952.250-70(d)(2).
DEAR 970.5223-1	Integration Of Environment, Safety, And Health Into Work Planning And Execution (Dec 2000)	Applies to subcontracts involving complex or hazardous work at LANL.
DEAR 970.5225-1	Compliance with Export Control Laws and Regulations (Nov 2015)	
DEAR 970.5229-1	State and Local Taxes (Dec 2000)	Paragraph (b) is deleted.

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THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$2,500:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.222-41	Service Contract Labor Standards (May 2014)	Unless exempted, applies if the principal purpose of the subcontract is to furnish services in the United States through the use of service employees. See FAR subparts 22.1003-3 and 22.1003-4 for exemptions to SCA.
FAR 52.222-42	Statement of Equivalent Rates for Federal Hires (May 2014)	Applies if FAR 52.222-41 is applicable.
FAR 52.222-43	Fair Labor Standards Act and Service Contract Labor Standards—Price Adjustment (Multiple Year and Option Contracts) (Aug 2018)	Applies in solicitations and subcontracts if the subcontract is expected to be a fixed-price, time-and-materials, or labor-hour service contract containing the clause at 52.222-41, Service Contract Labor Standards, and is a multiple year subcontract or is a subcontract with options to renew.
FAR 52.222-44	Fair Labor Standards Act and Service Contract Labor Standards—Price Adjustment (May 2014)	Applies in solicitations and subcontracts if the subcontract is expected to be a fixed-price service contract containing the clause at 52.222-41, Service Contract Labor Standards, and is not a multiple year subcontract or is not a subcontract with options to renew.
FAR 52.222-51	Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment—Requirements (May 2014)	Applies if SUBCONTRACTOR has made the certification specified in FAR 52.222-48(a).
FAR 52.222-53	Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services—Requirements (May 2014)	Applies if SUBCONTRACTOR has made the certification specified in FAR 52.222-52(a).
FAR 52.222-55	Minimum Wages Under Executive Order 13658 (Dec 2015)	Applies if FAR 52.222-41 is applicable.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$3,500:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.222-54	Employment Eligibility Verification (Oct 2015)	Applies in each subcontract that— (1) Is for— (i) Commercial or noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or (ii) Construction; (2) Has a value of more than \$3,500; and (3) Includes work performed in the United States.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$10,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.222-3	Convict Labor (Jun 2003)	Applies if subcontract will be performed in the United States, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, or the U.S. Virgin Islands.
FAR 52.222-21	Prohibition of Segregated Facilities (Apr 2015)	Applies if FAR 52.222-26, Equal Opportunity, is applicable.
FAR 52.222-26	Equal Opportunity (Sep 2016)	Applies unless one of the exemptions listed in FAR Subpart 22.807(b) is applicable.
FAR 52.222-40	Notification of Employee Rights Under the National Labor Relations Act (Dec 2010)	Applies only in subcontracts for commercial items as defined in FAR subpart 2.101 that will be performed wholly or partially in the United States, unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 3 of Executive Order 13496 of January 30, 2009.
FAR 52.223-18	Encouraging Contractor Policies to Ban Text Messaging While Driving (Aug 2011)	

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THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$10,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.225-1	Buy American Act - Supplies (May 2014)	Applies if the acquisition is for supplies for use within the United States; and none of the exceptions to the Buy American Act apply (e.g., nonavailability, public interest, or information technology that is a commercial item).
FAR 52.232-23	Assignment of Claims (May 2014) Alternate I (Apr 1984)	

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$15,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.222-36	Equal Opportunity for Workers with Disabilities (Jul 2014)	Applies unless exempted by the rules, regulations, or orders of the Secretary of Labor.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE IS \$25,000 OR MORE:		
Clause Number	Title and Date	Additional Conditions of Applicability
DEAR 970.5223-3	Agreement Regarding Workplace Substance Abuse Programs At DOE Sites (Dec 2010)	Solicitation provision applicable if performance of subcontract involves: (i) access to or handling of classified information or special nuclear materials; (ii) high risk of danger to life, the environment, public health and safety, or national security; or (iii) transportation of hazardous materials to or from a DOE site.
DEAR 970.5223-4	Workplace Substance Abuse Programs at DOE Sites (Dec 2010)	Applies if performance of subcontract involves: (i) access to or handling of classified information or special nuclear materials; (ii) high risk of danger to life, the environment, public health and safety, or national security; or (iii) transportation of hazardous materials to or from a DOE site.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$100,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
DEAR 970.5227-4	Authorization And Consent (Aug 2002), paragraph (a) only	Applies if subcontract is for research and development activities.
DEAR 970.5227-5	Notice and Assistance Regarding Patent and Copyright Infringement (Dec 2000)	

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE IS \$150,000 OR MORE:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.222-35	Equal Opportunity for Veterans (Oct 2015)	Applies unless exempted by the rules, regulations, or orders of the Secretary of Labor.
FAR 52.222-37	Employment Reports on Veterans (Feb 2016)	Applies unless exempted by the rules, regulations, or orders of the Secretary of Labor.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$150,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.203-7	Anti-Kickback Procedures (May 2014)	Paragraph (c) (1) is deleted.
FAR 52.203-12	Limitation On Payments To Influence Certain Federal Transactions (Oct 2010)	

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$250,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.203-3	Gratuities (Apr 1984)	

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THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$250,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.203-5	Covenant Against Contingent Fees (May 2014)	Applies only if subcontract is for non-commercial items.
FAR 52.203-6	Restriction on Subcontractor Sales to the Government (Sep 2006) Alternate I (Oct 1995)	Alternate I applies only if subcontract is for commercial items.
FAR 52.203-8	Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (May 2014)	Applies only if subcontract is for non-commercial items.
FAR 52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (May 2014)	Applies only if subcontract is for non-commercial items. If applicable, in paragraph (d) the term "Government" means "Government or CONTRACTOR."
FAR 52.203-17	Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights (Apr 2014)	
FAR 52.215-2	Audit and Records - Negotiation (Oct 2010)	Applies in solicitations and subcontracts that exceed the simplified acquisition threshold, and— (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these; (2) For which certified cost or pricing data are required; or (3) That require subcontractor to furnish reports as discussed in paragraph (e) of this clause.
FAR 52.219-8	Utilization of Small Business Concerns (Nov 2016)	Applies if subcontract offers further subcontracting opportunities and is to be performed within the United States and its outlying areas. If applicable and the subcontract exceeds \$700,000, SUBCONTRACTOR shall include FAR 52.219-8 in its lower tier subcontracts (except subcontracts to small business concerns) that offer further subcontracting possibilities.
FAR 52.222-17	Nondisplacement of Qualified Workers (May 2014)	Applies in in solicitations and subcontracts for (1) service contracts, as defined at FAR 22.001, (2) that succeed subcontracts for performance of the same or similar work at the same location and (3) that are not exempted by FAR 22.1203-2 or waived in accordance with FAR 22.1203-3.
FAR 52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004)	Applies unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs.
FAR 52.227-1	Authorization and Consent.(Dec 2007) Alternate I (Apr 1984)	
FAR 52.232-17	Interest (May 2014)	Applies unless one of the exemptions listed in FAR Subpart 32.611(a) is applicable.
DEAR 952.209-72	Organizational Conflicts of Interest (Aug 2009) with Alternate I	Applies if subcontract is for advisory and assistance services, as defined in FAR Subpart 2.101. The activities and programs listed in FAR Subpart 37.202 are excluded or exempted from the definition of advisory or assistance services.
DEAR 970.5223-7	Sustainable acquisition program. (Oct 2010)	Applies only to first tier subcontracts exceeding the simplified acquisition threshold that support operation of the DOE facility and offer significant subcontracting opportunities for energy efficient or environmentally sustainable products or services.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$500,000:		
Clause Number	Title and Date	Additional Conditions of Applicability
DEAR 952.226-74	Displaced Employee Hiring Preference (Jun 1997)	Applies if subcontract is not for commercial items, as that term is defined in 48 CFR Subpart 2.1.
DEAR 970.5226-2	Workforce Restructuring Under Section 3161 of the National Defense Authorization Act for Fiscal Year 1993 (Dec 2000)	Applies if subcontract is not for commercial items, as that term is defined in 48 CFR Subpart 2.1.

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THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$700,000, THE SUBCONTRACTOR IS A LARGE BUSINESS, AND FAR 52.219-8 IS APPLICABLE:

Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.219-9	Small Business Subcontracting Plan (Jan 2017), Alternate II (Nov 2016)	Applies in subcontracts to other than small business concerns that offer subcontracting possibilities, and are expected to exceed \$700,000. Subcontracting plans are not required when the subcontractor provides a commercial item subject to the clause at 52.244-6, Subcontracts for Commercial Items.

THE FOLLOWING CLAUSES APPLY ONLY TO A NEGOTIATED SUBCONTRACT IF THE SUBCONTRACT PRICE EXCEEDS \$2,000,000:

Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.230-2	Cost Accounting Standards (Oct 2015), excluding paragraph (b)	Applies unless the subcontract is: (1) exempted from CAS (see 48 CFR 9903.201-1 (FAR Appendix)), or (2) subject to modified CAS coverage (see 48 CFR 9903.201-2 (FAR Appendix)) or (3) awarded to a foreign concern. When applicable, paragraph (b) is deleted and SUBCONTRACTOR shall include the substance of this clause, without paragraph (b), in all other subcontracts of any tier.
FAR 52.230-3	Disclosure and Consistency of Cost Accounting Practices (Oct 2015), excluding paragraph (b)	Applies only to a negotiated subcontract that exceeds \$2,000,000 but is less than \$50 million, and the offeror certifies it is eligible for and elects to use modified CAS coverage. When applicable, paragraph (b) is excluded, and SUBCONTRACTOR shall include this clause in all other subcontracts of any tier, except those exempted by FAR 52.230-3 (d)).
FAR 52.230-4	Disclosure and Consistency of Cost Accounting Practices -- Foreign Concerns (Oct 2015)	Applies only to a negotiated subcontract with a foreign concern, unless the subcontract is otherwise exempt from CAS (see 48 CFR 9903.201-1 (FAR Appendix)). Foreign concerns do not include foreign governments or their agents or instrumentalities.
FAR 52.230-6	Administration of Cost Accounting Standards (Jun 2010)	Applies if FAR 52.230-2, 52.230-3, 52.230-4 or 52.230-5 is applicable.
DEAR 970.5232-5	Liability With Respect To Cost Accounting Standards (Dec 2000)	Applies if any Cost Accounting Standards clauses are included (i.e., FAR 52.230-2, 52.230-3, 52.230-6).

THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$2,000,000 AND THE SUBCONTRACTOR IS REQUIRED TO SUBMIT COST OR PRICING DATA, OR WHERE PREAWARD OR POSTAWARD COST DETERMINATIONS WILL BE SUBJECT TO FAR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES:

Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.215-10	Price Reduction for Defective Certified Cost or Pricing Data (Aug 2011)	Applies unless one of the exceptions in FAR 15.403-1(b) is applicable.
FAR 52.215-11	Price Reduction for Defective Certified Cost or Pricing Data -- Modifications (Aug 2011)	Applies if modification price exceeds \$2,000,000, none of the exceptions in FAR 15.403-1(b) are applicable to the modification, and FAR 52.215-10 was not applicable to subcontract.
FAR 52.215-12	Subcontractor Certified Cost or Pricing Data (Oct 2010)	Applies if FAR 52.215-10 is applicable.
FAR 52.215-13	Subcontractor Certified Cost or Pricing Data -- Modifications (Oct 2010)	Applies if FAR 52.215-11 is applicable.
FAR 52.215-15	Pension Adjustments and Asset Reversions (Oct 2010)	
FAR 52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions (July 2005)	Applies in solicitations and subcontracts for which it is anticipated that certified cost or pricing data will be required or for which any preaward or postaward cost determinations will be subject to FAR part 31.

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THE FOLLOWING CLAUSES APPLY ONLY IF THE SUBCONTRACT PRICE EXCEEDS \$2,000,000 AND THE SUBCONTRACTOR IS REQUIRED TO SUBMIT COST OR PRICING DATA, OR WHERE PREAWARD OR POSTAWARD COST DETERMINATIONS WILL BE SUBJECT TO FAR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES:

Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.215-19	Notification of Ownership Changes (Oct 1997)	Applies in solicitations and subcontracts for which it is contemplated that certified cost or pricing data will be required or for which any preaward or postaward cost determinations will be subject to FAR part 31.

THE FOLLOWING CLAUSES APPLY ONLY IF THE SCOPE OF WORK REQUIRES THE DESIGN, DEVELOPMENT, OR OPERATION OF A SYSTEM OF RECORDS ON INDIVIDUALS THAT IS SUBJECT TO THE PRIVACY ACT OF 1974:

Clause Number	Title and Date	Additional Conditions of Applicability
FAR 52.224-1	Privacy Act Notification (Apr 1984)	Applies if subcontract scope of work requires redesign, development or operation of a system of records on individuals that is subject to the Privacy Act of 1974.
FAR 52.224-2	Privacy Act (Apr 1984)	Applies if subcontract scope of work requires design, development or operation of a system of records on individuals that is subject to the Privacy Act of 1974.

THE FOLLOWING CLAUSES APPLY AS STATED IN THE CONDITIONS OF APPLICABILITY:

Clause Number	Title and Date	Conditions of Applicability
FAR 52.203-13	Contractor Code of Business Ethics and Conduct (Oct 2015)	Applies only in subcontracts that have a value in excess of \$5.5 million and a performance period of more than 120 days.
FAR 52.203-14	Display of Hotline Poster(s) (Oct 2015)	Applies in all subcontracts that exceed \$5.5 million, except when subcontract (1) is for the acquisition of a commercial item; or (2) is performed entirely outside the United States.
FAR 52.203-15	Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (Jun 2010)	Applies only in subcontracts for commercial items as defined in FAR subpart 2.101 that are funded under the Act.
FAR 52.203-16	Preventing Personal Conflicts of Interest (Dec 2011)	Applies in all subcontracts that exceed \$5.5 million, except when subcontract (1) is for the acquisition of a commercial item; or (2) is performed entirely outside the United States.
FAR 52.204-21	Basic Safeguarding of Covered Contractor Information Systems (Jun 2016)	Applies only in subcontracts for commercial items (other than commercially available off-the-shelf items), in which the subcontractor may have Federal contract information residing in or transiting through its information system.
FAR 52.208-8	Required Sources for Helium and Helium Usage Data (Apr 2014)	Applies where performance of subcontract involves a major helium requirement. See FAR 52.208-8 for definition of major helium requirement.
FAR 52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Oct 2015)	Applies in solicitations and subcontracts, other than a subcontract for commercially available off-the-shelf (COTS) items, where the subcontract value exceeds \$35,000.
FAR 52.211-15	Defense Priority And Allocation Requirements (Apr 2008)	Applies in subcontracts in support of an approved program issued in accordance with the provisions of the Defense Priorities and Allocations System (DPAS) regulation (15 CFR part 700).
FAR 52.222-1	Notice To The Government Of Labor Disputes (Feb 1997)	Applies if a potential labor dispute may delay the timely performance of the CONTRACTOR'S Prime Contract with DOE/NNSA.
FAR 52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation (Feb 1999)	Solicitation provision that applies in solicitations, other than those for construction, when a subcontract is contemplated that will include the clause at 52.222-26, Equal Opportunity, and the amount of the subcontract is expected be \$10 million or more.

Revised 1/16/19

THE FOLLOWING CLAUSES APPLY AS STATED IN THE CONDITIONS OF APPLICABILITY:		
Clause Number	Title and Date	Conditions of Applicability
FAR 52.223-7	Notice of Radioactive Materials (Jan 1997)	Applies if items containing either (1) radioactive material (requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended) or (2) other radioactive material (not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries) are to be delivered or serviced under this subcontract. If applicable, SUBCONTRACTOR shall notify CONTRACTOR, in writing, 30 days prior to delivery of, or prior to completion of any servicing required by this subcontract.
FAR 52.224-3	Privacy Training.(JAN 2017)	Applies when subcontractor employees will– (1) Have access to a system of records; (2) Create, collect, use, process, store, maintain, disseminate, disclose, dispose, or otherwise handle personally identifiable information; or (3) Design, develop, maintain, or operate a system of records.
FAR 52.225-8	Duty-Free Entry.(Oct 2010)	Applies if foreign supplies in excess of \$15,000 may be imported into the customs territory of the United States.
FAR 52.227-14	Rights in Data - General (May 2014) as modified by DEAR 927.409(a), including Alternate V (Dec 2007)	Applies in subcontracts in which technical data or computer software is expected to be produced and in subcontracts for supplies that contain a requirement for production or delivery of data.
FAR 52.227-16	Additional Data Requirements (Jun 1987)	Applies if subcontract involves experimental, developmental, research or demonstration work.
FAR 52.232-40	Providing Accelerated Payments to Small Business Subcontractors. (DEC 2013)	Applies only to subcontracts with Small Business Concerns.
DEAR 952.211-71	Priorities And Allocations (Atomic Energy) (Apr 2008)	Applies in subcontracts issued in accordance with the provisions of the Defense Priorities and Allocations System (DPAS) regulation (15 CFR part 700) that are placed in support of authorized DOE atomic energy programs.
DEAR 952.227-11	Patent Rights – Retention by the Contractor (Short Form) (Mar 1995)	Applies if subcontract is for experimental, developmental, demonstration or research work to be performed by a small business firm or domestic nonprofit organization as defined at FAR Subpart 27.301. Subcontracts which are subject to exceptional circumstances in accordance with 35 U.S.C. 202 and subparagraph (b)(5) of DEAR 970.5227-12 are exempt from the requirements of this clause.
DEAR 952.227-13	Patent Rights – Acquisition by the Government (Sept 1997)	Applies if subcontract is for experimental, developmental, demonstration or research work, and subcontractor is <u>not</u> a small business firm or domestic nonprofit organization as defined at FAR Subpart 27.301.
DEAR 970.5204-3	Access To And Ownership Of Records (Oct 2014)	Applies in all subcontracts that contain DEAR 970.5223-1, Integration of Environment, Safety, and Health Into Work Planning and Execution.
DEAR 970.5208-1	Printing (Dec 2000)	Applies when printing is required, as "printing" is defined in Title I, Definitions, of the U.S. Government Printing and Binding Regulations (http://jcp.senate.gov/jcpregs.pdf)
DEAR 970.5222-1	Collective Bargaining Agreements - Management and Operating Contracts (Dec 2000)	Applies to subcontracts for protective services and other services performed at LANL which affect the continuity of operation of LANL.
DEAR 970.5227-1	Rights in Data-Facilities (Dec 2000)	Applies if subcontract involves the design or operation of any LANL plants or facilities or specially designed equipment for such LANL plants or facilities, or related support services for those plants or facilities.
DEAR 970.5227-7	Royalty Information (Dec 2000)	Solicitation provision that applies if the amount of royalties reported during negotiation is >\$250.

Revised 1/16/19

THE FOLLOWING CLAUSES APPLY AS STATED IN THE CONDITIONS OF APPLICABILITY:		
Clause Number	Title and Date	Conditions of Applicability
DEAR 970.5227-8	Refund Of Royalties (Aug 2002)	Applies if the amount of royalties reported during negotiation of the subcontract exceeds \$250. If applicable, SUBCONTRACTOR shall insert the substance of this clause in all lower tier subcontracts under this subcontract in which the amount of royalties reported during negotiation of the subcontract exceeds \$250.
DEAR 970.5227-12	Patent Rights Management and Operating Contracts, For-Profit Contractor, Advance Class Waiver (Dec 2000)	Applies if subcontract covers or is likely to cover subject matter that is classified for reasons of security.
DEAR 970.5232-3	Accounts, Records, and Inspection (Dec 2010)	Applies to subcontracts of any tier where costs incurred are a factor in determining the amount payable to the subcontractor. When the condition precedent is met, only paragraphs (a) through (h) of the clause shall apply.

EXHIBIT "A"

GENERAL CONDITIONS

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GC-1 DEFINITIONS (Nov 2018)

"CONTRACTOR" means Triad National Security, LLC (Triad), a limited liability company, which manages and operates Los Alamos National Laboratory (LANL) pursuant to Contract No. 89233218CNA000001 between the U.S. Department of Energy (DOE) / National Nuclear Security Administration (NNSA) and Triad. CONTRACTOR also means Subcontract Administrator, the individual authorized to act on behalf of Triad.

"Beneficial Occupancy" or "Use and Possession Prior to Completion", if used in this subcontract or task order, means the procedure where CONTRACTOR occupies or makes use of any part of the Work, in accordance with General Condition GC-29 USE OF COMPLETED PORTIONS OF WORK.

"Days" means calendar days unless otherwise provided.

"FAR" means the Federal Acquisition Regulations at 48 CFR Chapter 1.

"Final Acceptance" means CONTRACTOR'S acceptance of all of the Work as a whole following SUBCONTRACTOR completion and successful inspection and testing. It is conclusive except for latent defects, gross mistakes or fraud.

"Final Completion", if used in this subcontract or task order, means the point when all of the Work reasonably inferable from Subcontract Documents has been completed, as determined by CONTRACTOR. This includes the final cleanup of the premises, completion of all final inspection punch list items, and submission of all remaining contractual documents.

"GOVERNMENT" means the United States of America and includes the DOE / NNSA

"Jobsite" means a site at which the Work shall be performed under this subcontract.

"Laboratory" or "LANL" means the geographical location of Los Alamos National Laboratory, a federally funded research and development center owned by the DOE / NNSA.

"Subcontract" means this agreement, including all attachments, appendices, sections, exhibits, schedules, and revisions hereto, as issued from time to time.

"Subcontract Documents" denotes this Subcontract and those appendices and exhibits referenced thereon.

"SUBCONTRACTOR" means the company, corporation, partnership, individual, or other entity to which this Subcontract is issued, its authorized representatives, successors, and permitted assigns

"Substantial Completion", if used in this subcontract or task order, means the point when the Work or a designated portion of the Work is sufficiently complete, in accordance with the Subcontract Documents, so that CONTRACTOR may use or occupy the Work or designated portion thereof for its intended purpose, as determined by CONTRACTOR. Additional requirements for achieving Substantial Completion are provided in Exhibit D, Scope of Work and Technical Specifications.

"Work", "Goods" or "Services" means all the stated or implied activities to be performed by SUBCONTRACTOR as required by the Subcontract Documents, including the furnishing and supervision of all technical personnel and labor, and the supply of equipment, materials, and supplies necessary to perform this Subcontract.

GC-2A AUTHORIZED REPRESENTATIVES, COMMUNICATIONS AND NOTICES (Jan 2010)

Unless otherwise specified, all notices and communications in accordance with or related to this subcontract shall be between authorized representatives designated in writing by the parties and shall comply with security requirements set forth in Exhibit G "Security Requirements". Notices shall be in

writing and may be served either personally on the authorized representative of the receiving party, by electronic scanned document attached to an email, by facsimile, by courier or express delivery, or by certified mail to the address shown on the face of this subcontract or as directed by notice.

GC-3 INDEPENDENT CONTRACTOR (Jun 2009)

SUBCONTRACTOR represents that it is fully experienced, properly qualified, registered, licensed, equipped, organized, and financed to perform the Work under this subcontract. SUBCONTRACTOR shall act as an independent contractor and not as the agent of CONTRACTOR or GOVERNMENT in performing this subcontract, maintaining complete control over its employees and all of its suppliers and subcontractors of any tier. Nothing contained in this subcontract or any lower-tier purchase order or subcontract awarded by SUBCONTRACTOR shall create any contractual relationship between any lower-tier supplier or subcontractor and either CONTRACTOR or GOVERNMENT. SUBCONTRACTOR shall perform the Work hereunder in accordance with its own methods subject to compliance with the subcontract.

GC-4 SUBCONTRACT INTERPRETATION (Jun 2009)

All questions concerning interpretation or clarification of this subcontract by SUBCONTRACTOR shall be immediately submitted in writing to CONTRACTOR for resolution. Subject to the provisions of the General Condition titled "CHANGES," all determinations, instructions, and clarifications of CONTRACTOR shall be final and conclusive unless SUBCONTRACTOR believes such determinations, instructions or clarifications are fraudulent or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence, in which case SUBCONTRACTOR shall proceed under the terms of the Disputes clause.

At all times SUBCONTRACTOR shall proceed with the Work in accordance with the determinations, instructions, and clarifications of CONTRACTOR. SUBCONTRACTOR shall be solely responsible for requesting instructions or interpretations and shall be solely liable for any costs and expenses arising from its failure to do so.

GC-5 NOTICE TO PROCEED (Jul 2011)

SUBCONTRACTOR shall not commence work on site at LANL prior to receipt of a notice to proceed issued by the Subcontract Administrator. A notice to proceed shall not be issued prior to:

- (1) receipt by CONTRACTOR of a fully executed subcontract with the original signatures of both parties;
- (2) receipt by CONTRACTOR of certificates of insurance and endorsements evidencing that required coverage and limits of insurance are in full force and effect, when such certificates and endorsements are required herein;
- (3) approval by CONTRACTOR of SUBCONTRACTOR'S ES&H Plan submitted in accordance with the requirements of Exhibit F, when such ES&H Plan is required herein;
- (4) approval by CONTRACTOR of any plans submitted by SUBCONTRACTOR in accordance with the requirements of Exhibit G, when such plan(s) is/are required herein;
- (5) receipt by CONTRACTOR of executed payment and performance bonds, when such payment and performance bonds are required herein; and
- (6) receipt by CONTRACTOR of written confirmation that SUBCONTRACTOR has included or will include (i.e. flow down) in subcontracts with its lower-tier suppliers and subcontractors all environment, safety, health, security, and quality assurance requirements contained in Exhibits F, G and H necessary to fulfill this subcontract as it relates to their portion of the Work; and
- (7) compliance by SUBCONTRACTOR with any other applicable requirements specified in the subcontract.

CONTRACTOR reserves the right to issue a limited notice to proceed (LNTP) where CONTRACTOR determines circumstances require specific pre-performance activities necessary to support the subcontract. However this LNTP does not constitute a formal Notice to Proceed as set forth in this clause.

GC-6 ORDER OF PRECEDENCE (Jun 2009)

In resolving conflicts, discrepancies, errors or omissions between Subcontract Documents, the following order of precedence from highest to lowest shall be used, with the acknowledgement that a particular subcontract may not be comprised of all the documents listed below.

- (1) Subcontract Form of Agreement
- (2) Appendix SFA-1 titled "FAR & DEAR Clauses Incorporated By Reference"
- (3) Exhibit "A" – General Conditions
- (4) Exhibit "B" – Special Conditions
- (5) Exhibit "F" – Environmental, Safety and Health Requirements
- (6) Exhibit "G" – Security Requirements
- (7) Exhibit "H" – Quality Assurance Requirements
- (8) Exhibit "C" – Schedule of Quantities and Prices
- (9) Exhibit "D" – Scope of Work
- (10) Exhibit "D" – Technical Specifications
- (11) Exhibit "E" – Drawings
- (12) All other subcontract documents

NOTE: If this subcontract is funded in whole or part under the American Recovery and Reinvestment Act of 2009, Exhibit A1, ADDITIONAL GENERAL CONDITIONS RELATING TO WORK FUNDED UNDER AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (May 2009) shall take precedence over all documents listed herein except for the Subcontract Form of Agreement.

GC-7 STANDARDS AND CODES (Jun 2009)

Wherever references are made in this subcontract to standards or codes in accordance with which the Work under this subcontract is to be performed, the edition or revision of the standards or codes current on the effective date of this subcontract shall apply unless otherwise expressly stated. In case of conflict between any referenced standards and codes and any Subcontract Documents, the General Condition titled "SUBCONTRACT INTERPRETATION" shall apply.

GC-8 LAWS AND REGULATIONS (Nov 2018)

- (a) SUBCONTRACTOR shall comply with the requirements of applicable federal, state, and local laws and regulations (including DOE regulations), unless relief has been granted in writing by the appropriate regulatory agency. SUBCONTRACTOR shall also comply with DOE Directives, NNSA Policy Letters, and Laboratory policies and procedures, or parts thereof, which are identified in the subcontract. Copies of any such directives, letters, policies and procedures will be provided to the SUBCONTRACTOR upon request.
- (b) If SUBCONTRACTOR discovers any discrepancy or inconsistency between this subcontract and any law, ordinance, statute, rule, regulation, order or decree, SUBCONTRACTOR shall immediately notify CONTRACTOR in writing.
- (c) Regardless of the performer of the work, SUBCONTRACTOR is responsible for compliance with the requirements of this clause. SUBCONTRACTOR agrees to insert the substance of this clause, including this paragraph (c), in its subcontracts at any tier.

GC-9 PERMITS (Jun 2009)

Except as otherwise specified, SUBCONTRACTOR shall procure and pay for all permits, licenses, certifications and other applicable governing authority requirements and inspections, other than inspections performed by CONTRACTOR or GOVERNMENT or permits which by law or regulation must

be acquired by CONTRACTOR or GOVERNMENT. SUBCONTRACTOR shall furnish any documentation, bonds, securities, deposits or assistance required to permit performance of the Work.

GC-10 TAXES (Jun 2009)

- (a) SUBCONTRACTOR shall pay all taxes, levies, duties and assessments of every nature due in connection with the Work under this subcontract, and shall make any and all payroll deductions and withholdings required by law. SUBCONTRACTOR agrees to indemnify and hold harmless CONTRACTOR and GOVERNMENT from any liability on account of any and all such taxes, levies, duties, assessments and deductions.
- (b) SUBCONTRACTOR shall with the approval of CONTRACTOR apply for and obtain for the benefit of the project any available exemption, deduction or exclusion under applicable laws for which SUBCONTRACTOR, CONTRACTOR or GOVERNMENT qualify.

GC-11 NEW MEXICO GROSS RECEIPTS TAX (Jun 2009)

SUBCONTRACTOR is required to pay such New Mexico Gross Receipts Tax (NMGR) as may be required by law. CONTRACTOR will issue a New Mexico Nontaxable Transaction Certificate (NTTC) to all Subcontractors who provide goods or services to CONTRACTOR, on the condition that SUBCONTRACTOR only uses the NTTC as permitted by New Mexico law. In no event will the payment of NMGR by SUBCONTRACTOR or its immediate and lower-tier subcontractors be considered an allowable cost under this subcontract if SUBCONTRACTOR or its immediate and lower-tier subcontractors are eligible for applicable deductions or exemptions from NMGR under New Mexico law.

GC-12 FINES AND PENALTIES (Jun 2009)

If a state or federal agency takes an enforcement action with associated fines and penalties against CONTRACTOR and/or Government for regulatory and/or permit noncompliance that resulted from a failure of SUBCONTRACTOR to perform in accordance with this Subcontract (e.g., failure to meet regulatory reporting milestones, making false statements in reports, etc.), SUBCONTRACTOR shall reimburse CONTRACTOR and/or the Government for the amount of any resultant fine and/or the cost of additional Work required as a result of the enforcement action. CONTRACTOR may withhold such amounts from any payments due SUBCONTRACTOR.

GC-13 CONTRACTOR'S RIGHT TO OFFSET (Jan 2010)

CONTRACTOR may collect any amount determined by the Subcontract Administrator to be owed to CONTRACTOR by offsetting the amount against any payment due to the SUBCONTRACTOR under any subcontract it has with CONTRACTOR issued pursuant to CONTRACTOR'S contract with GOVERNMENT for management and operation of Los Alamos National Laboratory. Any challenge to the amount of an offset under this clause shall be resolved under the Disputes clause of this subcontract.

GC-14 LABOR, PERSONNEL AND WORK RULES (Jun 2009)

- (a) SUBCONTRACTOR shall employ only competent and skilled personnel to perform the Work and shall remove from the Jobsite any SUBCONTRACTOR personnel determined to be unfit or to be acting in violation of any provision of this subcontract. SUBCONTRACTOR is responsible for maintaining labor relations in such manner that there is harmony among workers and shall comply with and enforce project and Jobsite procedures, regulations, work rules and work hours established by CONTRACTOR and GOVERNMENT.
- (b) CONTRACTOR may, at its sole discretion, temporarily or permanently bar from the Work, and any other location within the Los Alamos National Laboratory (LANL), any employee of SUBCONTRACTOR or any of its lower-tier subcontractors by written notice to SUBCONTRACTOR. In the event an employee is excluded from the Jobsite, SUBCONTRACTOR shall, promptly replace such individual with another who is fully competent

and skilled to perform the Work. SUBCONTRACTOR shall not be entitled to compensation for any costs resulting from the removal of such employee. '

- (c) SUBCONTRACTOR shall, to the extent permissible under applicable law, comply with the provisions of all labor agreement(s) which apply to the Work performed under this subcontract. If required by the terms of any such labor agreement(s), SUBCONTRACTOR shall, immediately after subcontract award, agree to comply with and be bound by the terms of such labor agreement(s).
- (d) If SUBCONTRACTOR has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this subcontract, SUBCONTRACTOR shall immediately give notice, including all relevant information, to CONTRACTOR.
- (e) SUBCONTRACTOR shall include the substance of this clause in all lower-tier subcontracts which require work to be performed at LANL.

GC-15 COMMERCIAL ACTIVITIES (Jun 2009)

Neither SUBCONTRACTOR nor its employees shall establish any commercial activity or issue concessions or permits of any kind to third parties for establishing commercial activities on the Jobsite or any other lands owned or controlled by CONTRACTOR or GOVERNMENT.

GC-16 NONDISCLOSURE, PUBLICITY AND ADVERTISING (Jan 2010)

SUBCONTRACTOR'S disclosure to a third party of any information, material, data, charts, graphs, or records obtained, developed or maintained under this subcontract is prohibited, except as approved in writing in advance by CONTRACTOR. Furthermore, SUBCONTRACTOR shall not make any announcement, release any photographs, or release any information concerning this subcontract, or the Laboratory, or any part thereof to any member of the public, press, business entity, or any other third party unless prior written consent is obtained from CONTRACTOR. All SUBCONTRACTOR requests for review and approval shall be addressed to CONTRACTOR. Additionally, SUBCONTRACTOR will ensure that its employees, subcontractors and/or affiliates who work on this subcontract understand this non-disclosure requirement and provide written acknowledgement of the same if requested by CONTRACTOR'S Subcontract Administrator. SUBCONTRACTOR agrees to include a similar requirement in all lower-tier subcontracts. All requests for authorization to release information by lower-tier subcontractors shall be subject approval of CONTRACTOR'S Subcontract Administrator.

GC-17 ENVIRONMENTAL, SAFETY AND HEALTH REQUIREMENTS (Jun 2009)

- (a) SUBCONTRACTOR shall be solely responsible for conducting operations under this subcontract to avoid risk of harm to the health and safety of persons and property and for inspecting and monitoring all its equipment, materials and work practices to ensure compliance with its obligations under this subcontract.
- (b) Throughout performance of the Work, SUBCONTRACTOR shall conduct all operations in such a way as to minimize impact upon the natural environment and prevent any spread or release of contaminated or hazardous substances.
- (c) SUBCONTRACTOR shall be solely responsible for complying with Exhibit F titled "ENVIRONMENTAL, SAFETY, AND HEALTH REQUIREMENTS", if made a part of this subcontract.

GC-25 OVERSIGHT OF WORK BY SUBCONTRACTOR (Jun 2009)

At all times during performance of this Subcontract and until the Work is completed and accepted, SUBCONTRACTOR shall directly oversee the Work, and when Work is performed on site at LANL, assign and have on site a competent individual, who is satisfactory to CONTRACTOR, who has authority to act for SUBCONTRACTOR.

GC-30 CONTRACTOR'S COMPLIANCE WITH DOE DIRECTIVES (Jun 2009)

When requested by CONTRACTOR, SUBCONTRACTOR shall provide such information, assistance and support as necessary to ensure CONTRACTOR'S compliance with any DOE directives that may be applicable to the scope of the work. If SUBCONTRACTOR believes that such request for information, assistance or support is not provided for elsewhere in the subcontract and constitutes a change under the General Condition titled "Changes", SUBCONTRACTOR shall proceed in accordance with the "Changes" clause.

GC-31A INSPECTION AND TESTING (Jun 2009)

- (a) All equipment and material furnished and work performed shall be properly inspected by SUBCONTRACTOR at its expense and shall at all times be subject to quality surveillance and quality audit by CONTRACTOR, GOVERNMENT or their authorized representatives who, upon reasonable notice, shall be afforded full and free access to the shops, factories or other places of business of SUBCONTRACTOR and its suppliers and subcontractors of any tier for such quality surveillance or audit. If any equipment, material or work is determined by CONTRACTOR or GOVERNMENT to be defective or not in conformance with this subcontract the provisions of the General Condition titled "WARRANTY" shall apply.
- (b) Unless otherwise provided in the subcontract, testing of equipment, materials or work shall be performed by SUBCONTRACTOR at its expense and in accordance with subcontract requirements. Should tests in addition to those required by this subcontract be desired by CONTRACTOR, SUBCONTRACTOR will be given reasonable notice to permit such testing. Such additional tests will be at CONTRACTOR'S expense.
- (c) SUBCONTRACTOR shall furnish samples as requested and shall provide reasonable assistance and cooperation necessary to permit tests to be performed on materials or work in place including reasonable stoppage of work during testing.

GC-35A CHANGES (Jun 2009)

- (a) CONTRACTOR may at any time, without notice to the sureties if any, unilaterally direct in writing subcontract changes, including additions, deletions, rescheduling and acceleration or deceleration, place of performance, to all or any part of the Work, and SUBCONTRACTOR agrees to perform such work as changed.
- (b) If any change under this clause, whether or not changed by any such order, or an act or omission of CONTRACTOR or GOVERNMENT, directly or indirectly causes an increase or decrease in the cost of or in the time required to perform any part of the Work an equitable adjustment shall be made to pricing or time of performance, or both. SUBCONTRACTOR shall, within thirty (30) calendar days of such change or act or omission, notify CONTRACTOR and submit detailed information substantiating its impact. SUBCONTRACTOR waives its rights, if any, to an equitable adjustment if it fails to comply with the requirements of this subclause. Upon agreement as to the impact of the change or act or omission, the subcontract shall be modified accordingly.
- (c) SUBCONTRACTOR shall proceed diligently with performance of the Work, pending final resolution of any request for adjustment, dispute, claim, appeal, or action arising under the subcontract, and comply with any decision of CONTRACTOR.

GC-36 DISPUTES (Jan 2010)

- (a) Definitions. For purposes of this clause:

"Board" means the Civilian Board of Contract Appeals or such successor Board as may be established by law.

"Arbitration decision" means a decision of the Board in an arbitration pursuant to this clause.

"Claim" means a written demand or written assertion by either contracting party seeking as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of a subcontract term, or other relief arising under, or relating to, this subcontract. A voucher, invoice, or other request for payment or equitable adjustment under the terms of the subcontract that is not in dispute when submitted is not a claim. The SUBCONTRACTOR may convert such submission into a claim if it is disputed either as to liability or amount, or is not acted upon in a reasonable time, by demanding a decision by the Subcontract Administrator.

"Counterclaim" means a claim asserted in a pleading filed with the Board in an arbitration proceeding pursuant to this clause which arises from the same occurrence or transaction that is the subject matter of the opposing party's claim. Counterclaims do not need to be submitted to the Subcontract Administrator for decision.

- (b) Nature of the Subcontract. This subcontract is not a Government contract and, therefore, is not subject to the Contract Disputes Act of 1978 (41 U.S.C. §§601-613). SUBCONTRACTOR acknowledges that GOVERNMENT is not a party to the subcontract, and, for purposes of the subcontract CONTRACTOR is not an agent of GOVERNMENT. Consequently, the provision for arbitration by the Board, as provided for in this clause, does not create or imply the existence of privity of contract between SUBCONTRACTOR and GOVERNMENT.
- (c) Scope of Clause. The rights and procedures set forth in this clause are the exclusive rights and procedures for resolution of all claims and disputes arising under, or relating to, this subcontract, and no action based upon any claim or dispute arising under, or relating to, this subcontract shall be brought in any court except as provided in this clause. The parties shall be bound by any arbitration decision rendered pursuant to this clause, which shall be vacated, modified, or corrected only as provided in the Federal Arbitration Act (9 U.S.C. §§1-16). An arbitration decision may only be enforced in any court of competent jurisdiction in the State of New Mexico.
- (d) Filing a Claim/Subcontract Administrator's Decision.
- (1) Unless otherwise provided in this subcontract, SUBCONTRACTOR must file any claim against CONTRACTOR within sixty (60) Days after SUBCONTRACTOR knew or should have known the facts giving rise to the claim. Failure to file a claim within the period prescribed by this paragraph shall constitute a waiver of SUBCONTRACTOR'S right, if any, to an equitable adjustment under the subcontract.
 - (2) SUBCONTRACTOR shall submit any claim in writing to the Subcontract Administrator who shall issue a decision on the matter within sixty (60) Days of receipt of the claim. If the Subcontract Administrator fails to issue a decision within sixty (60) Days, SUBCONTRACTOR may request mediation or demand for arbitration as provided in paragraphs (e) and (f) of this clause.
 - (3) CONTRACTOR may, at any time prior to final payment under the subcontract or expiration of any warranty period, whichever is later, file a claim against SUBCONTRACTOR by issuing a written decision by the Subcontract Administrator asserting such a claim.
 - (4) The decision of the Subcontract Administrator shall be final and conclusive unless SUBCONTRACTOR requests mediation or demands arbitration in accordance with the terms of this clause.
- (e) Request for Mediation.

- (1) If the decision of the Subcontract Administrator is not satisfactory to SUBCONTRACTOR, or the Subcontract Administrator has failed to timely issue a decision in accordance with subparagraph (d) 2) of this provision, and SUBCONTRACTOR desires to pursue further action, SUBCONTRACTOR may request that the matter be scheduled for mediation. The request for mediation must be made within forty-five (45) Days after receipt of the Subcontract Administrator's decision.
 - (2) If the Subcontract Administrator believes that mediation of the dispute is likely to lead to a satisfactory resolution, he or she will so inform SUBCONTRACTOR and the matter will be scheduled for mediation. The parties will agree on the format of the mediation and will jointly select the mediator. The cost of the mediator and related expenses shall be divided evenly between the parties.
 - (3) If the Subcontract Administrator decides that mediation is not likely to lead to a satisfactory resolution of the claim, or that a mediation undertaken pursuant to this clause has been unsuccessful, he or she will so inform SUBCONTRACTOR in writing.
- (f) Demand for Arbitration. If the decision of the Subcontract Administrator is not satisfactory to SUBCONTRACTOR, or if SUBCONTRACTOR'S request for mediation has been denied, or a mediation undertaken pursuant to paragraph (e) of this clause has been unsuccessful, or the Subcontract Administrator has failed to timely issue a decision in accordance with subparagraph (d) 2) of this clause, and SUBCONTRACTOR desires to pursue further action, SUBCONTRACTOR must submit to the Board a written demand for arbitration of the claim within forty-five (45) Days after receipt of the Subcontract Administrator's decision, or within forty-five (45) Days after the Subcontract Administrator notifies SUBCONTRACTOR that its request for mediation has been denied or that the mediation undertaken pursuant to paragraph (e) has been unsuccessful, whichever is later.
- (g) Arbitration Procedures/Costs. The Board shall arbitrate the claim and any counterclaims in accordance with the Rules of the Board. All claims for \$100,000 or less shall be arbitrated under the Board's Small Claims (Expedited) Procedure. All other claims, regardless of dollar amount, shall be arbitrated under the Board's Accelerated Procedure. Both parties shall be afforded an opportunity to be heard and to present evidence in accordance with the Rules of the Board. Unless the Board orders otherwise, each party shall pay its own costs of prosecuting or defending an arbitration before the Board.
- (h) Review of Arbitration Decision. An arbitration decision shall be final and conclusive unless a party files a timely action to vacate, modify, or correct the decision pursuant to the Federal Arbitration Act.
- (i) Subcontractor Performance Pending Claim Resolution. SUBCONTRACTOR shall proceed diligently with performance of the subcontract and shall comply with any decision of the Subcontract Administrator pending final resolution of any claim or dispute arising under, or relating to, the subcontract.
- (j) Choice of Law. The subcontract shall be governed by federal law as provided in this paragraph. Irrespective of the place of award, execution, or performance, the subcontract shall be construed and interpreted, and its validity determined, according to the federal common law of government contracts as enunciated and applied to prime government contracts by the federal boards of contract appeals and federal courts having appellate jurisdiction over their decisions rendered pursuant to the Contract Disputes Act of 1978. The Federal Arbitration Act, other federal statutes, and federal rules shall govern as applicable. To the extent that federal common law of government contracts is not dispositive, the laws of the State of New Mexico shall apply.
- (k) Interest. Interest on amounts adjudicated due and unpaid by a party shall be paid from the date the complaining party files a demand for arbitration with the Board. Interest on claims shall be

paid at the rate established by the Secretary of the Treasury of the United States pursuant to Public Law 92-41 (85 Stat. 97).

GC-37 BANKRUPTCY (Jun 2009)

In the event SUBCONTRACTOR enters into proceedings relating to bankruptcy, whether voluntary or involuntary, SUBCONTRACTOR agrees to furnish CONTRACTOR written notification of the bankruptcy within five (5) days of the proceedings.

GC-38 RECORDS AND AUDIT (Jun 2009)

- (a) SUBCONTRACTOR shall maintain records and accounts in connection with the performance of this subcontract which will accurately document incurred costs, both direct and indirect, of whatever nature for a period of three (3) years from final payment unless otherwise specified by applicable law. CONTRACTOR, GOVERNMENT or their representatives shall have the right to examine and copy, at all reasonable times and with advance notification, such records and accounts for the purpose of verifying payments or requests for payment when costs are the basis of such payment and to evaluate the reasonableness of proposed subcontract price adjustments and claims.
- (b) If CONTRACTOR or GOVERNMENT establishes uniform codes of accounts for the project, SUBCONTRACTOR shall use such codes in identifying its records and accounts.
- (c) For subcontracts in excess of \$100,000.00, FAR clause 52.215-2, Audit and Records – Negotiation (JUN 1999) shall also apply, when included in Appendix SFA-1, FAR and DEAR Clauses Incorporated By Reference.

GC-39A WARRANTY (Jun 2009)

- (a) SUBCONTRACTOR warrants that it will perform the services under this subcontract with the degree of high professional skill, sound practices and good judgment normally exercised by recognized professional firms providing services of a similar nature. In addition to all other rights and remedies which CONTRACTOR or GOVERNMENT may have, SUBCONTRACTOR shall, at its expense, re-perform the services to correct any deficiencies which result from SUBCONTRACTOR'S failure to perform in accordance with the above standards.
- (b) All equipment and materials, if any, furnished under this subcontract shall be new, of clear title and of the most suitable grade of their respective kinds for their intended uses unless otherwise specified. All workmanship shall be first class and performed in accordance with sound industry practices acceptable to CONTRACTOR.
- (c) SUBCONTRACTOR warrants all equipment, materials and services it furnishes or performs under this subcontract against all defects for a period from Work commencement to a date twelve (12) months after acceptance of the project as a whole by GOVERNMENT or SUBCONTRACTOR'S most favored customer warranty term, whichever is longer.
- (d) In the event CONTRACTOR or GOVERNMENT discover defects in design, equipment, materials or workmanship at any time before the expiration of the specified warranty period, SUBCONTRACTOR shall, upon written notice from CONTRACTOR or GOVERNMENT and at SUBCONTRACTOR'S sole expense, cure any such defect by re-performing defective services and/or workmanship and repairing or replacing defective equipment and/or materials. All costs incidental to such corrective action including, but not limited to, review, access, removal, retesting and re-inspection shall be borne by SUBCONTRACTOR. If SUBCONTRACTOR fails to take corrective action within a reasonable time, CONTRACTOR or GOVERNMENT may perform the corrective measures by other reasonable means and SUBCONTRACTOR agrees to pay CONTRACTOR all actual costs, including labor burden, reasonably incurred by CONTRACTOR in performing or in having performed corrective actions. SUBCONTRACTOR further warrants

any and all corrective measures for a period of twelve (12) months following their acceptance by CONTRACTOR or GOVERNMENT.

GC-41 INDEMNITY (Jun 2009)

- (a) To the maximum extent permitted by applicable law, but no further, SUBCONTRACTOR hereby releases and shall indemnify, defend and hold harmless CONTRACTOR, GOVERNMENT and their subsidiaries and affiliates and the officers, agents, employees, successors and assigns and authorized representatives of all the foregoing from and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interest, attorney's fees, costs, expenses, and losses of whatsoever kind or nature in connection with or incidental to the performance of this subcontract, whether arising before or after completion of the Work hereunder and in any manner directly or indirectly caused, occasioned, or contributed to in whole or in part, or claimed to be caused, occasioned or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive of SUBCONTRACTOR, its lower-tier suppliers, subcontractors or of anyone acting under its direction or control or on its behalf.
- (b) The foregoing shall include, but is not limited to, indemnity for:
 - (1) Property damage and injury to or death of any person, including employees of CONTRACTOR, GOVERNMENT or SUBCONTRACTOR.
 - (2) The breach by SUBCONTRACTOR of any representation, warranty, covenant, or performance obligation of this subcontract.
- (c) SUBCONTRACTOR specifically waives any immunity provided against this indemnity by an industrial insurance or workers' compensation statute.

GC-42 PATENT AND INTELLECTUAL PROPERTY INDEMNITY (Jun 2009)

- (a) SUBCONTRACTOR hereby indemnifies and shall defend and hold harmless GOVERNMENT, CONTRACTOR, and their representatives from and against any and all claims, actions, losses, damages, and expenses, including attorney's fees, arising from any claim, whether rightful or otherwise, that any concept, product, design, equipment, material, process, copyrighted material or confidential information, or any part thereof, furnished by SUBCONTRACTOR under this subcontract constitutes an infringement of any patent or copyrighted material or a theft of trade secrets.
- (b) If use of any part of such concept, product, design, equipment, material, process, copyrighted material or confidential information is limited or prohibited, SUBCONTRACTOR shall, at its sole expense, procure the necessary licenses to use the infringing or a modified but non-infringing concept, product, design, equipment, material, process, copyrighted material or confidential information or, with CONTRACTOR'S prior written approval, replace it with substantially equal but non-infringing concepts, products, designs, equipment, materials, processes, copyrighted material or confidential information; provided, however,
 - (1) That any such substituted or modified concepts, products, designs, equipment, material, processes, copyrighted material or confidential information shall meet all the requirements and be subject to all the provisions of this subcontract; and
 - (2) That such replacement or modification shall not modify or relieve SUBCONTRACTOR of its obligations under this subcontract.
- (c) The foregoing obligation shall not apply to any concept, product, design, equipment, material, process, copyrighted material or confidential information the detailed design of which (excluding rating and/or performance specifications) has been furnished in writing by CONTRACTOR or GOVERNMENT to SUBCONTRACTOR.

GC-43 ASSIGNMENTS (Jun 2009)

- (a) Any assignment of this subcontract or rights hereunder, in whole or part, without the prior written consent of CONTRACTOR shall be void, except that upon ten (10) calendar days written notice to CONTRACTOR, SUBCONTRACTOR may assign, with CONTRACTOR'S approval, claims for monies due or to become due hereunder to a bank, trust company, or other financial institution including any federal lending agency. Any such assignment may cover all amounts payable under this subcontract and not already paid, and shall not be made to more than one party, except that any such assignment may be made to one party, as agent or trustee of two or more parties participating in SUBCONTRACTOR'S financing. Payments to an assignee of any monies due, or to become due hereunder, shall be subject to setoff or recoupment for any present or future claim or claims which CONTRACTOR may have against SUBCONTRACTOR arising under this and other subcontracts. Upon such assignment, SUBCONTRACTOR shall provide CONTRACTOR with two copies of any such assignment and shall indicate on each invoice to whom payment is to be made.
- (b) This subcontract may be assigned by CONTRACTOR, in whole or in part, to GOVERNMENT or to others upon written notice to SUBCONTRACTOR.
- (c) No assignment will be approved which would relieve SUBCONTRACTOR or its sureties, if any, of their responsibilities under this subcontract.

GC-44 SUSPENSION (Jun 2009)

- (a) CONTRACTOR may by written notice to SUBCONTRACTOR suspend the Work under this subcontract in whole or in part at any time. Upon receipt of such notice, SUBCONTRACTOR shall discontinue work to the extent specified in the notice; continue to protect and maintain the Work; and take any other steps to minimize costs associated with such suspension.
- (b) Upon receipt of notice to resume suspended work, SUBCONTRACTOR shall immediately resume performance under this subcontract to the extent required in the notice.
- (c) If SUBCONTRACTOR intends to assert a claim for equitable adjustment under this clause it must, pursuant to the General Condition titled "CHANGES" and within ten (10) calendar days after receipt of notice to resume work, submit a written notification of claim and within twenty (20) calendar days thereafter a written proposal setting forth the impact of such suspension. Any such claim for equitable adjustment must exclude profit.

GC-45 EXPORT COMPLIANCE (Jun 2009)

- (a) SUBCONTRACTOR agrees that U.S. export control laws and regulations may govern aspects of the performance of this subcontract. SUBCONTRACTOR also acknowledges that all applicable export rules and regulations of the origin countries shall apply to the exports of commodities, software and technology (technical data and assistance) under this subcontract. Additionally, SUBCONTRACTOR acknowledges that other rules and regulations may restrict the use of certain parties under this subcontract. Such laws, rules and regulations are generally described below. SUBCONTRACTOR shall be responsible for any delay resulting from SUBCONTRACTOR'S failure to comply fully and timely with any such laws, rules or regulations described herein.

(1) Restricted Parties Lists

The U.S. Government, foreign governments and international organizations publish Restricted Parties Lists ("Lists") that identify parties (such as known or suspected terrorists, money launderers and drug traffickers) restricted from certain or all types of transactions. SUBCONTRACTOR shall review all applicable Lists prior to initiating transactions with any third party for the performance of all or any portion of the Work to

ensure such third party is not identified on any applicable Lists. SUBCONTRACTOR shall not enter into any transactions with any third party identified on any applicable Lists.

(2) U.S. Export Control Requirements

- (i) SUBCONTRACTOR will comply with all U.S. export control laws and regulations, including the provisions of the Export Administration Act of 1979 and the U.S. Export Administration Regulations (15 C.F.R. 730-774) promulgated thereunder, the U.S. Department of Energy's export regulations (10 C.F.R. Part 810), the Arms Export Control Act, the International Traffic in Arms Regulations, and the sanctions and laws administered by the U.S. Treasury Department, Office of Foreign Assets Control (OFAC). SUBCONTRACTOR acknowledges that these statutes and regulations impose restrictions on the import and export to foreign countries and foreign nationals of certain categories of items and data and that licenses from the U.S. Department of Energy, U.S. Department of Commerce, U.S. State Department and/or OFAC may be required before such items or data can be disclosed, and that such licenses may impose further restrictions on use of and further disclosure of such data. SUBCONTRACTOR further acknowledges that the information which CONTRACTOR may disclose to SUBCONTRACTOR pursuant to the subcontract may be subject to these statutes and regulations.
- (ii) All work produced by SUBCONTRACTOR that is deemed to be export controlled shall be clearly marked with a legend on each page which states "Restricted access and distribution pursuant to U.S. export control laws."

(3) Licensing Requirements

- (i) General: The United States of America and each country have export regulations that control commodities, software and technology for various reasons, such as national security, foreign policy, anti-terrorism, and to avoid the proliferation of weapons and potential weapons, e.g. certain nuclear, chemical or biological agents. Numerous countries have export regulations that specifically address dual-use items, meaning commercial items with the potential to be applied to military and/or weapon proliferation uses. SUBCONTRACTOR shall ensure that all necessary export licenses are timely obtained, or license exceptions confirmed in writing to CONTRACTOR, prior to the export of any commodity, software or technology. SUBCONTRACTOR shall provide to CONTRACTOR a copy of any export license obtained upon receipt by SUBCONTRACTOR, and in any event prior to the export occurring.
 - (ii) United States of America (USA) Export Licensing Requirements: SUBCONTRACTOR is solely responsible for obtaining any required USA export licenses for all commodities, software, and technology being supplied in the performance of the Work, except for any commodity, software or technology supplied by CONTRACTOR. A copy of the export license, or SUBCONTRACTOR'S rationale as to why a license is not required, shall be provided to CONTRACTOR in writing upon receipt of the export license or SUBCONTRACTOR'S determination that a license is not required, and in any event prior to the export occurring.
- (b) In the event work under this subcontract is performed off shore, unless otherwise expressly provided for or otherwise approved in writing by CONTRACTOR:
- (1) SUBCONTRACTOR shall use the specifications and technical data only for purposes of this subcontract;

- (2) SUBCONTRACTOR shall not disclosure the specifications and/or technical data to any other person, except a lower-tier subcontractor within the same country where SUBCONTRACTOR is performing the work under this subcontract;
 - (3) Nothing in this subcontract shall permit SUBCONTRACTOR or any other non U.S. person to acquire any rights in the specifications and/or technical data;
 - (4) SUBCONTRACTOR, and any lower-tier subcontractor, shall destroy or return to CONTRACTOR all of the specifications and technical data upon completion of its subcontract; and
 - (5) SUBCONTRACTOR shall deliver the deliverables under this subcontract directly to and only to CONTRACTOR.
- (c) SUBCONTRACTOR hereby agrees to indemnify, defend and hold CONTRACTOR, GOVERNMENT, each of their respective affiliates and the respective directors, officers, employees and representatives of each harmless from and against any and all claims, legal or regulatory actions, final judgments, reasonable attorneys' fees, civil fines and any other losses which any of them may incur as a result of SUBCONTRACTOR'S failure to comply with its obligations under this clause.
- (d) The substance of this clause shall be included in all subcontracts at every tier.

GC-46 SUBCONTRACTS (Jul 2011)

- (a) SUBCONTRACTOR shall not subcontract with any third party for the performance of all or any portion of the Work without the advance written approval of CONTRACTOR. Purchase orders and subcontracts of any tier must include provisions to secure all rights and remedies of CONTRACTOR and GOVERNMENT provided under this subcontract, and must impose upon the lower-tier supplier and subcontractor all of the duties and obligations required to fulfill this subcontract as it relates to their portion of the Work. SUBCONTRACTOR shall provide written confirmation prior to commencement of work on site at LANL that SUBCONTRACTOR has included or will include (i.e. flow down) in subcontracts with its lower-tier suppliers and subcontractors all environment, safety, health, security and quality assurance requirements contained in Exhibits F, G and H necessary to fulfill this subcontract as it relates to their portion of the Work. Additionally, when requested by CONTRACTOR, SUBCONTRACTOR shall provide written confirmation that SUBCONTRACTOR has included (i.e. flowed down) in subcontracts with its lower-tier suppliers and subcontractors all other duties and obligations required to fulfill this Subcontract as it relates to their portion of the Work.
- (b) Copies of all purchase orders and subcontracts are to be provided to CONTRACTOR upon request. Pricing may be deleted unless the compensation to be paid there under is reimbursable under this subcontract.
- (c) No subcontract will be approved which would relieve SUBCONTRACTOR or its sureties, if any, of their responsibilities under this subcontract.

GC-47A TERMINATION FOR CONVENIENCE (Jun 2009)

FAR clause 52.249-2 titled "TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED PRICE) (May 2004) applies to this subcontract, as specified in Appendix SFA-1.

GC-48 TERMINATION FOR DEFAULT (Jun 2009)

FAR clause 52.249-8 titled "DEFAULT (FIXED PRICE SUPPLY AND SERVICE) (Apr 1984)" applies to this subcontract, as specified in Appendix SFA-1.

GC-49A FINAL INSPECTION AND ACCEPTANCE (Jun 2009)

When SUBCONTRACTOR considers the Work under this subcontract, or any CONTRACTOR specified segment thereof, complete and ready for acceptance, SUBCONTRACTOR shall notify CONTRACTOR in writing. CONTRACTOR will conduct such reviews, inspections and tests as needed to satisfy CONTRACTOR that each segment, or upon completion, the Work conforms to subcontract requirements. CONTRACTOR will notify SUBCONTRACTOR of any nonconformance and SUBCONTRACTOR shall take corrective action and the acceptance procedure shall be repeated as required by CONTRACTOR until each segment or, upon completion, the Work is accepted. If the Work is accepted in segments such acceptance is provisional pending Final Acceptance of the Work as a whole. CONTRACTOR'S written Notice of Final Acceptance of the Work shall be conclusive except for latent defects, fraud, or CONTRACTOR'S and GOVERNMENT'S rights under the General Condition titled "WARRANTY".

GC-50 NON-WAIVER (Jan 2010)

- (a) Failure by CONTRACTOR to insist upon strict performance of any terms or conditions of this subcontract shall not operate as, nor be deemed to be, a waiver or release of SUBCONTRACTOR'S obligations under this subcontract. The following illustrative examples include but are not limited to:
- (1) Failure or delay to exercise any rights or remedies provided herein or by law;
 - (2) The acceptance of or payment for any goods or services hereunder;
 - (3) Failure to properly notify SUBCONTRACTOR in the event of breach of any obligation;
 - (4) The review or failure by CONTRACTOR to review SUBCONTRACTOR submissions;
 - (5) The inspection and test by CONTRACTOR or the failure to inspect and test the Work; and
 - (6) The termination either in whole or in part of Work under this subcontract.
- (b) CONTRACTOR or GOVERNMENT reserves the right to insist upon strict performance hereof and to exercise any of its rights or remedies as to any prior or subsequent default hereunder.

GC-51A REPRESENTATIONS AND CERTIFICATIONS (Mar 2012) [Not applicable in subcontracts below \$3,500]

All Representations and Certifications provided by SUBCONTRACTOR are incorporated by reference and made part of this subcontract.

GC-52 SUBCONTRACT CLOSE-OUT CERTIFICATION AND RELEASE REQUIREMENTS (Jun 2009)

To administratively close out this subcontract, SUBCONTRACTOR shall submit, in addition to other requirements of this subcontract, the following documentation:

- (1) Property Status

Include a certification that states the following:

"All Government and CONTRACTOR-furnished property, material, special tooling, and special test equipment furnished, acquired, or generated and accountable to this subcontract has been consumed, delivered or otherwise disposed of by transfer, plant clearance or other authorized means as instructed by CONTRACTOR."

(2) Release and Certificate of Final Payment

SUBCONTRACTOR and each assignee, if any, under an assignment entered into under this subcontract and in effect at the time of final payment under this subcontract, shall execute and deliver, at the time of, and as a condition precedent to, final payment under this subcontract, a release in the format and content provided by CONTRACTOR, discharging CONTRACTOR, GOVERNMENT, and their respective officers, agents, and employees, of and from all liabilities, obligations and claims arising out of or under this subcontract.

GC-55 SEVERABILITY (Jun 2009)

The provisions of this subcontract are severable. If any provision shall be determined to be illegal or unenforceable, such determination shall have no effect on any other provision hereof, and the remainder of the subcontract shall continue in full force and effect so that the purpose and intent of this subcontract shall still be met and satisfied.

GC-56 SURVIVAL (Jun 2009)

All terms, conditions and provisions of this subcontract, which by their nature are independent of the period of performance, shall survive the cancellation, termination, expiration, default or abandonment of this subcontract.

GC-57 RELEASE AGAINST CLAIMS (Jun 2009)

SUBCONTRACTOR shall promptly pay all claims of persons or firms furnishing labor, equipment or materials used in performing the Work hereunder. CONTRACTOR reserves the right to require SUBCONTRACTOR to submit satisfactory evidence of payment and releases of all such claims. CONTRACTOR may withhold any payment until SUBCONTRACTOR has furnished such evidence of payment and release and shall indemnify and defend CONTRACTOR and GOVERNMENT against any liability or loss from any such claim.

GC-59 CERTIFICATION REGARDING FORMER LANS OR CONTRACTOR EMPLOYEES (Jan 2019)

- (a) Effective November 1, 2018, individuals who retire under CONTRACTOR'S or Los Alamos National Security LLC's (LANS) Defined Benefit Pension Plan (i.e., TCP-1), who wish to begin a retirement benefit, are required to have a true and complete severance from CONTRACTOR or LANS with no prior prearrangement for reemployment with CONTRACTOR or any of CONTRACTOR'S affiliated companies or subcontractors to do similar work. This can be documented by completing a form at the time of termination stating that no prearrangement for reemployment existed prior to the termination, and by demonstrating a true and complete severance from CONTRACTOR, before working for any of CONTRACTOR'S affiliated companies or subcontractors, for at least:
- one hundred eighty (180) days, if under the age of sixty (60) at the time of termination; or
 - ninety (90) days, if age sixty (60) or above at the time of termination.
- (b) Effective November 1, 2018, individuals who retire under CONTRACTOR'S 401(k) Retirement Plan (i.e., TCP-2), before attaining age sixty (60), are required to have a true and complete severance from CONTRACTOR with no prior prearrangement for reemployment with CONTRACTOR or any of CONTRACTOR'S affiliated companies or subcontractors to do similar work. This can be documented by completing a form at the time of termination stating that no prearrangement for reemployment existed prior to the termination and by demonstrating a true and complete severance from CONTRACTOR, before working for any of CONTRACTOR'S affiliated companies or subcontractors, for at least one hundred eighty (180) days. Individuals who

retire under CONTRACTOR'S 401(k) Retirement Plan after age sixty (60) do not have any restrictions on reemployment.

- (c) Any former employee of CONTRACTOR or LANS who was terminated for cause or who resigned in lieu of termination for cause is prohibited from returning to work at Los Alamos National Laboratory (LANL). SUBCONTRACTOR and its lower tier subcontractors may not employ any former employee of CONTRACTOR or of LANS, who was terminated for cause or who resigned in lieu of termination for cause, for any on-site work at LANL or for any work under this subcontract in which such former employee may have any direct or indirect substantive contact with a current CONTRACTOR employee, unless approved by CONTRACTOR in writing prior to commencement of work by SUBCONTRACTOR.
- (d) In order to assure compliance with paragraphs (a) through (c), SUBCONTRACTOR shall, with respect to its employees who are assigned to work under this subcontract and those of its lower tier subcontractors' employees who are assigned to work under this subcontract, certify that all individuals who are assigned to work under this subcontract are in compliance with the requirement of paragraphs (a) through (c) of this clause. Such certification must be provided in writing to CONTRACTOR before the start of work under this subcontract. In making this certification SUBCONTRACTOR and its lower tier subcontractors may rely on information provided by applicants for employment or current employees, so long as SUBCONTRACTOR and its lower tier subcontractors have exercised due diligence and have, at a minimum, obtained the following information from each applicant or employee:
 - (1) whether the employee was a former LANS or CONTRACTOR employee, and if so:
 - (i) the date of separation;
 - (ii) age at separation; and
 - (iii) reason for separation.
 - (2) whether the employee is a member of CONTRACTOR'S or LANS' Defined Benefit Pension Plan (i.e., TCP-1) or CONTRACTOR'S 401(k) Plan (i.e., TCP-2); and
 - (3) confirmation that, if the employee retired under one of CONTRACTOR'S retirement plans, to the extent described above, the employee had no prior prearrangement for reemployment by SUBCONTRACTOR or one of its lower tier subcontractors prior to separation.
- (e) CONTRACTOR may exclude SUBCONTRACTOR from future subcontracts for a reasonable, specified period, if CONTRACTOR determines that SUBCONTRACTOR breached any of the requirements contained in paragraphs (a) through (c) of this clause.
- (f) SUBCONTRACTOR shall ensure that the substance of this clause is included in all lower-tier subcontracts awarded pursuant to this subcontract.

GC-60 SUBCONTRACTS WITH CONTRACTOR'S TEAM MEMBERS AND TEAM MEMBER AFFILIATES (Nov 2018)

- (a) As used in this provision:
 - (1) Team Members means any of the following entities: Battelle Memorial Institute, The Texas A&M University System, and The Regents of the University of California.
 - (2) Team Member Affiliate means any person or entity which is a wholly owned, majority owned, or otherwise an affiliate of any Team Member. The term 'affiliate' is defined at FAR 2.101.

- (b) Because of restrictions in the contract between NNSA and CONTRACTOR concerning the payment of fee or profit when subcontracting with any Team Member or any Team Member Affiliate, as well as Organizational Conflict of Interest concerns, neither SUBCONTRACTOR nor any tier of its lower tier subcontractors or suppliers shall enter into a subcontract with any Team Member or any Team Member Affiliate to provide goods or services under this subcontract without the advance written approval of the Subcontract Administrator. In the event that written approval is granted to enter into a subcontract with a Team Member or a Team Member Affiliate, no fee or profit shall be paid to such Team Member or Team Member Affiliate under the proposed subcontract. In the event it is later determined that a Team Member or a Team Member Affiliate has been paid a fee or profit, SUBCONTRACTOR shall reimburse CONTRACTOR the amount of this fee or profit.
- (c) SUBCONTRACTOR shall include the substance of this provision in all lower tier subcontracts and purchase orders.

GC-77 GREEN / SUSTAINABLE PRODUCTS (Feb 2015)

Whenever possible, SUBCONTRACTOR shall offer green/sustainable products and/or repair/spare parts, which meet the (1) minimum content levels for sustainable products or (2) Environmental Program certification or (3) product attributes, listed at the *Sustainable Facilities Tool* website found at <http://www.sftool.gov/greenprocurement>. Minimum content levels, environmental program certifications and product attributes, if any, are listed under the column titled "Procurement Info" for each product.

When green/sustainable products and/or repair/spare parts are purchased under this subcontract, when requested by CONTRACTOR, SUBCONTRACTOR shall provide quarterly reports to CONTRACTOR describing green/sustainable products procured by CONTRACTOR in the preceding quarter. Reports shall (at a minimum) include the following information:

1. Total dollar value of CONTRACTOR purchases for the preceding quarter, separated into each product category shown at the Sustainable Facilities Tool website.
2. Total dollar value of CONTRACTOR green/sustainable product purchases for the preceding quarter, separated into each product category shown at the *Sustainable Facilities Tool* website.

GC-80B INVOICING AND PAYMENT (Nov 2018)

- (a) SUBCONTRACTOR shall prepare and submit invoices pursuant to the Special Condition titled "MEASUREMENT FOR PAYMENT." CONTRACTOR may reject all or part of an invoice because the measurement for payment provisions have not been met, noting the deficiencies for SUBCONTRACTOR correction and compliance with the subcontract requirements.

CONTRACTOR may require SUBCONTRACTOR to withhold amounts from its billings until a reserve is set aside in an amount that the Subcontract Administrator considers necessary to protect CONTRACTOR'S interests. The Subcontract Administrator may require a withhold of up to 5 percent (5%) of the amounts due to SUBCONTRACTOR, but the total amount shall not exceed \$50,000. The amounts withheld shall be retained until the Subcontract Administrator no longer deems such action necessary to protect CONTRACTOR'S interests.

Within thirty (30) calendar days after receipt of an invoice, CONTRACTOR will pay SUBCONTRACTOR the approved invoice amount, less any withholds.

CONTRACTOR may, as a condition precedent to any payment, require SUBCONTRACTOR to submit for itself, its subcontractors, immediate and remote, and all material suppliers, vendors, laborers and other parties acting through or under it, complete waivers and releases of all claims against CONTRACTOR or GOVERNMENT arising under or by virtue of this subcontract. Upon request, SUBCONTRACTOR shall in addition furnish acceptable evidence that all such claims have been satisfied.

Failure to specify the subcontract number or to submit supporting documentation may be cause for invoice rejection or delay in payment.

- (b) Any amounts otherwise payable under this subcontract may be withheld, in whole or in part, if:
- (1) Any claims are filed against SUBCONTRACTOR by CONTRACTOR, GOVERNMENT or third parties (for which CONTRACTOR or GOVERNMENT is or may become liable);
 - (2) SUBCONTRACTOR is in default of any subcontract condition;
 - (3) Adjustments are due from previous overpayment or audit result; or
 - (4) Offsets in favor of CONTRACTOR in other transactions are asserted.

CONTRACTOR will pay SUBCONTRACTOR such withheld payments when all issues are resolved to CONTRACTOR'S satisfaction.

If claims filed against SUBCONTRACTOR connected with performance under this subcontract, for which CONTRACTOR may be held liable if unpaid (e.g., unpaid withholding and back taxes), are not promptly discharged by SUBCONTRACTOR after receipt of written notice from CONTRACTOR to do so, CONTRACTOR may discharge such claims and deduct all costs in connection with such removal from withheld payments or other monies due, or which may become due, to SUBCONTRACTOR. If the amount of such withheld payment or other monies due SUBCONTRACTOR under this subcontract is insufficient to meet such costs, or if any claim against SUBCONTRACTOR is discharged by CONTRACTOR after final payment is made, SUBCONTRACTOR and its surety or sureties, if any, shall promptly pay CONTRACTOR all costs incurred thereby regardless of when such claim arose.

- (c) Upon final acceptance of the Work by CONTRACTOR, SUBCONTRACTOR shall submit to CONTRACTOR a completed final release of claims acceptable to CONTRACTOR and a final correct invoice. Within thirty (30) calendar days after receipt of the final release of claims and final correct invoice, CONTRACTOR shall pay SUBCONTRACTOR the amount then remaining due.
- (d) SUBCONTRACTOR shall submit all invoices, in form and format directed by CONTRACTOR, electronically to invoices@lanl.gov or through the U.S. Postal Service to:

Triad National Security, LLC
Los Alamos National Laboratory
Accounting Department, MS P240
P.O. Box 1663
Los Alamos, NM 87545-1663

GC-82 ON-SITE USE OF RADIOACTIVE MATERIAL (Aug 2014)

No radioactive material may be used or stored at the work site unless approved in advance in writing by the Subcontract Administrator.

GC-83 SECURITY INTEREST (Aug 2014)

- (a) SUBCONTRACTOR grants CONTRACTOR a security interest in the Goods and any special tooling and special test equipment as defined in FAR 45.101, Definitions, together with all raw materials, components, and inventory identified thereto ("Collateral"), whether now owned or hereafter acquired, and products and proceeds thereof as security for any and all advances or progress payments now or hereafter made under or in connection with this subcontract. SUBCONTRACTOR further agrees:

- (1) to execute such financing statements or other related documents evidencing such security interest as CONTRACTOR may request from time to time for the purpose of perfecting or continuing such security interest in the Collateral;
 - (2) to allow CONTRACTOR to unilaterally file unexecuted financing statements or other related documents to the extent legally permitted without notice to SUBCONTRACTOR; and
 - (3) to provide to CONTRACTOR such information as is necessary for filing financing statements or related documents.
- (b) SUBCONTRACTOR agrees that it will, and will permit CONTRACTOR'S representatives to, appropriately mark and/or segregate the Collateral so as to indicate CONTRACTOR'S and GOVERNMENT'S interest therein. SUBCONTRACTOR further agrees that it will not sell, assign, or otherwise dispose of any of the Collateral and that it will not create, suffer, or permit to attach or exist any lien or encumbrance thereon, except for the interest granted CONTRACTOR hereunder. SUBCONTRACTOR further agrees that CONTRACTOR'S right to a security interest is in addition to and not in lieu of any other rights of CONTRACTOR or GOVERNMENT to the Collateral under this subcontract or at law.
- (c) SUBCONTRACTOR shall insert the substance of this clause, including this subclause, in all its purchase orders and subcontracts pursuant to which advances or progress payments are to be made.

GC-84 ASSESSMENT OF SUBCONTRACTOR'S PERFORMANCE (Aug 2014)

CONTRACTOR shall periodically assess SUBCONTRACTOR'S performance to document how well SUBCONTRACTOR performed to the various standards/requirements described in this subcontract. That information will be used by CONTRACTOR in the future to determine whether SUBCONTRACTOR will be invited to submit proposals/bids for future solicitations for similar work.

GC-85 LOWER-TIER SUBCONTRACTORS (Aug 2014)

- (a) SUBCONTRACTOR shall submit to CONTRACTOR the list of all lower-tier (at all tiers) subcontractors and their function, together with a point of contact address and telephone number for each such subcontractor. Whenever, for any reason, SUBCONTRACTOR needs to substitute for, add to, or remove one or more of the aforementioned lower-tier subcontractors from Work under this Subcontract, SUBCONTRACTOR shall do so only with the prior approval of CONTRACTOR.
- (b) CONTRACTOR may not approve any proposed additional/substitute lower-tier subcontractor if CONTRACTOR has actual knowledge of the proposed additional/substitute lower-tier subcontractor's poor environmental compliance or safety performance under existing subcontracts with CONTRACTOR or any work performed for others even if the proposed lower-tier subcontractor has otherwise met all other ES&H qualification requirements in Exhibit F of this subcontract.
- (c) SUBCONTRACTOR'S request for CONTRACTOR approval of additional/substitute lower-tier subcontractor(s) must include the following information for each proposed additional/substitute lower-tier subcontractor:
- A brief explanation of the need to alter the list of lower-tier subcontractors
 - Name, address, contact, and phone number of proposed lower-tier subcontractor
 - Summary list of tasks to be performed under this Subcontract by the proposed lower-tier subcontractor
 - ESH qualification data for the proposed lower-tier subcontractor if required under Exhibit F of this subcontract.

GC-86 PROGRESS REPORTS (Aug 2014)

When requested by CONTRACTOR, SUBCONTRACTOR shall provide to CONTRACTOR, on a monthly basis, a concise summary report, in form and format and at a time directed by CONTRACTOR, describing the Work accomplished during the reporting period, Work forecasted to be completed during the next reporting period and a summary of problem areas, if any.

When requested by CONTRACTOR, CONTRACTOR and SUBCONTRACTOR shall meet weekly to review the status of the Work.

GC-88 MINIMUM WAGES UNDER EXECUTIVE ORDER 13658 (Mar 2015)

This clause implements Executive Order 13658, Establishing a Minimum Wage for Contractors, dated February 12, 2014, and OMB Policy Memorandum M-14-09, dated June 12, 2014.

- (a) Each service employee, laborer, or mechanic employed in the United States (the 50 States and the District of Columbia) in the performance of this contract by SUBCONTRACTOR or any lower-tier subcontractor, regardless of any contractual relationship which may be alleged to exist between SUBCONTRACTOR and each service employee, laborer, or mechanic, shall be paid not less than the applicable minimum wage under Executive Order 13658. The minimum wage required to be paid to each service employee, laborer, or mechanic performing work on this subcontract between January 1, 2015, and December 31, 2015, shall be \$10.10 per hour.
- (b) SUBCONTRACTOR shall adjust the minimum wage paid under this subcontract each time that Secretary of Labor's annual determination of the applicable minimum wage under section 2(a)(ii) of Executive Order 13658 results in a higher minimum wage. Adjustments to the Executive Order minimum wage under section 2(a)(ii) of Executive Order 13658 will be effective for all service employees, laborers, or mechanics subject to the Executive Order beginning January 1 of the following year. The Secretary of Labor will publish annual determinations in the Federal Register no later than 90 days before such new wage is to take effect. The Secretary will also publish the applicable minimum wage on www.wdol.gov (or any successor website). The applicable published minimum wage is incorporated by reference into this subcontract.
- (c) CONTRACTOR will adjust the subcontract price or subcontract unit price under this clause only for the increase in labor costs resulting from the annual inflation increases in the Executive Order 13658 minimum wage beginning on January 1, 2016. CONTRACTOR shall consider documentation as to the specific costs and workers impacted in determining the amount of the adjustment.
- (d) CONTRACTOR will not adjust the subcontract price under this clause for any costs other than those identified in paragraph (c) of this clause, and will not provide price adjustments under this clause that result in duplicate price adjustments with the respective clause of this subcontract implementing the Service Contract Labor Standards statute (formerly known as the Service Contract Act) or the Wage Rate Requirements (Construction) statute (formerly known as the Davis Bacon Act).
- (e) SUBCONTRACTOR shall include the substance of this clause, including this paragraph (e) in all subcontracts.

GC-89 STOP WORK IN EVENT OF IMMINENT DANGER (Jan 2019) [Applicable to work performed on site at Los Alamos National Laboratory (LANL)]

SUBCONTRACTOR shall immediately cease any activity that is imminently dangerous to the life or health of the workers, the public, or the environment. In the event of imminent danger, any Federal or Contractor employee is authorized to instruct the SUBCONTRACTOR to stop work. CONTRACTOR must be contacted immediately after the event such that a written stop-work order can be issued in accordance with Section I clause FAR 52.242-15, Stop-Work Order, Alternate I. Employees of the

SUBCONTRACTOR shall be apprised of their right to stop work pursuant to this clause.
SUBCONTRACTOR shall include this clause in all subcontracts to be performed at LANL.

Sample Build

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EXHIBIT "B"

SPECIAL CONDITIONS

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B-2 SMALL BUSINESS SUBCONTRACTING PLAN

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SC-2 AUTHORITY OF PERSONNEL (Nov 2018)

- (a) CONTRACTOR designates the below named individual as the Subcontract Administrator to administer the subcontract and act as CONTRACTOR'S authorized representative.

Maureen Armijo
Triad National Security, LLC
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop D447
Los Alamos, NM 87545-1663
Phone: (505) 665-2098
Fax: (505) 665-8944
Email: m_armijo@lanl.gov

Additionally, all correspondence shall be issued and received by the designated Subcontract Administrator. The Subcontract Administrator is the only individual authorized to direct SUBCONTRACTOR to deviate from the express, written terms of the subcontract.

- (b) CONTRACTOR designates the below named individual as the subcontract technical representative (hereafter STR), who is the point of contact for all of the technical aspects of the subcontract and is responsible for oversight of SUBCONTRACTOR's technical performance under this subcontract. The STR is also responsible for monitoring and facilitating SUBCONTRACTOR compliance with various subcontract requirements, such as submission of technical deliverables and evidence of completion of training requirements.

Jim Lujan
Triad National Security, LLC
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop B260
Los Alamos, NM 87545-1663
Phone: (505) 665-0718
Fax: (505) 667-5586
Email: jewel@lanl.gov

The STR may utilize qualified technical personnel and administrative assistants to assist him/her in the performance of the STR's duties. However, the designated STR is ultimately responsible for Technical Oversight of the Work (i.e., the process by which a subcontract technical representative monitors and surveils a subcontractor's performance and compliance with subcontract terms and conditions). Should SUBCONTRACTOR and the STR disagree over the technical aspects of the subcontract such matters will be immediately referred to CONTRACTOR'S Subcontract Administrator for resolution. The STR does not possess any authority, express or implied, to direct SUBCONTRACTOR to deviate from the terms and conditions of the subcontract.

- (c) The Subcontract Administrator's Property Representative (SAPR) is:

ASM-PM Disposition Office
Triad National Security, LLC
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop C308
Los Alamos, NM 87545
Phone: (505) 665-8079
Fax: (505) 667-3195
Email: disposition@lanl.gov

The ASM-PM Disposition Office is designated to monitor the government property provided, acquired, or used in the performance of this subcontract. Any questions concerning said

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government property should be addressed to the Subcontract Administrator with a copy to the SAPR. The SAPR is also authorized to take any action necessary to ensure compliance with Federal Property Management Regulations, DOE Property Management Regulations, the LANL Property Management Manual and the terms of this subcontract regarding the appropriate use, loss, replacement, transfer, return, or other disposition of government-furnished property or subcontractor-acquired property. Notwithstanding the foregoing, the SAPR does not possess authority to change any of the requirements under this subcontract.

- (d) The Acquisition Services Management Division Manager, or the Manager's designee, may change the Subcontract Administrator, STR or SAPR at any time upon written notice to the SUBCONTRACTOR.

**SC-3A COMMENCEMENT, PROGRESS AND COMPLETION OF THE WORK (Aug 2014)
(DEVIATION)**

- (a) SUBCONTRACTOR shall furnish sufficient personnel, equipment and facilities, and shall work such hours as necessary, to assure prosecution of the Work to completion in accordance with Subcontract Milestone and Payment Schedules in Exhibit "C" Form B
- (b) When the Subcontract Schedule is deemed critical by CONTRACTOR, SUBCONTRACTOR shall provide to CONTRACTOR, whenever requested, for CONTRACTOR'S approval, an original and subsequently updated Subcontract Schedule showing all activities and sequence of operations needed for the orderly performance and completion of the Work in accordance with the Subcontract Milestones set forth above. SUBCONTRACTOR shall adhere to the approved Subcontract Schedule, submitting periodic progress reports and/or proposed schedule changes in form and manner directed by CONTRACTOR.

SC-10A INSURANCE REQUIREMENTS (Jun 2017)

- (a) SUBCONTRACTOR shall, at its expense, maintain in effect at all times, during the performance of the Work, insurance coverage with limits not less than those set forth below and with insurers with an A.M. Best rating of not less than A-VII and under forms of policies satisfactory to CONTRACTOR:

- (1) Workers' Compensation with limits and coverage as required by any applicable State and Federal law or regulation.
- (2) Employer's Liability of not less than \$500,000 each accident.

The above policy shall include an Insurer's Waiver of Subrogation in favor of CONTRACTOR, the GOVERNMENT, each of their members, subsidiaries and affiliates, and the officers, directors and employees of each such entity.

- (3) Commercial General Liability with limits of liability for bodily injury, property damage and personal injury of not less than:

\$ 500,000	Combined single limit for Bodily Injury and Property Damage each occurrence;
\$ 500,000	Personal Injury Limit each occurrence;
\$1,000,000	Products-Completed Operations Annual Aggregate Limit; and
\$1,000,000	General Annual Aggregate Limit (other than Products-Completed Operations).

- (i) Coverage (a)(3) shall apply to the indemnity agreement in the General Condition titled "INDEMNITY".

- (ii) To the maximum extent permitted by applicable law but no further, CONTRACTOR, and its members, subsidiaries, affiliates, and the officers,

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directors, and employees of the foregoing shall each be named as an Additional Insured under the Commercial General Liability Insurance policy, including any Excess or Umbrella Liability Insurance(s) but only with respect to liability caused by or arising out of the acts or omissions of SUBCONTRACTOR or its officers, employees or agents in the performance of ongoing operations for CONTRACTOR and GOVERNMENT. Such insurance shall: (1) include an Insurer's waiver of subrogation in favor of each Additional Insured; (2) be primary and non-contributory as regards any similar insurance coverage maintained for or by the Additional Insureds whether primary, excess, contingent, or on any other basis; (3) contain a cross-liability clause, also known as separation of interest / severability of interests / separation of insureds condition; and (4) be on an occurrence policy form, not a claims made form. The insurance limits provided by SUBCONTRACTOR'S insurance (primary and excess) to the Additional Insureds must be exhausted before any contribution from such Additional Insureds' own insurance, but not other insurance applicable to a loss which may be subject to contribution.

- (4) Automobile Liability (Owned, hired and non-owned) with combined single limits of liability for bodily injury or property damage of not less than \$500,000 for any one occurrence. SUBCONTRACTOR'S Automobile Liability Insurance shall include coverage for Automobile Contractual Liability.
- (5) In the event SUBCONTRACTOR maintains insurance covering loss or damage to equipment, tools, or any other property of SUBCONTRACTOR such insurance shall include an Insurer's waiver of subrogation in favor of CONTRACTOR and GOVERNMENT.
- (b) The required limits of coverage specified in (a)(1) through (a)(4) may be satisfied by a combination of a primary policy and an excess or umbrella policy. Coverage shall be provided on a follow form basis, include a Priority of coverage endorsement applying immediately before any other SUBCONTRACTOR Insurance coverage, whether primary, excess, contingent or any other basis and as excess over the primary policies of Employer's Liability, Commercial General Liability and Automobile Liability as required above. Such insurance shall include the same Additional Insured and Insurer's Waiver of Subrogation provisions required by the primary policies and shall be primary and non-contributory with any similar insurance coverage maintained by the Additional Insureds.
- (c) Should any of the Work involve:
 - (1) aircraft (fixed wing or helicopter) owned, operated or chartered by SUBCONTRACTOR, liability arising out of such aircraft shall be insured for a combined single limit not less than \$10,000,000 each occurrence and such limit shall apply to Bodily Injury (including passengers) and Property Damage Liability. To the maximum extent permitted by applicable law but no further, such insurance shall name CONTRACTOR and GOVERNMENT, and their members, subsidiaries and affiliates, and the officers, directors, and employees of the foregoing each as Additional Insureds, but only with respect to liability caused by or arising out of the acts or omissions of SUBCONTRACTOR or its officers, employees or agents in the performance of ongoing operations for CONTRACTOR and GOVERNMENT. The insurance shall also include an Insurer's waiver of subrogation in favor of the Additional Insureds, state that it is primary insurance as regards the Additional Insureds and contain a cross-liability or severability of interest clause. If the aircraft hull is insured such insurance shall provide for an Insurer's waiver of subrogation rights in favor of CONTRACTOR and GOVERNMENT and their members, subsidiaries and affiliates, and the officers, directors, and employees of the foregoing. In the event SUBCONTRACTOR charts aircraft, the foregoing insurance

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and evidence of insurance may be furnished by the owner of the chartered aircraft, provided the above requirements are met.

- (2) the possibility of a third party bodily injury and/or property damage as a result of contamination of soil, water, or the atmosphere by the discharge of harmful substances, SUBCONTRACTOR shall also carry Pollution Liability Insurance in an amount not less than \$2,000,000 per occurrence/annual aggregate to cover third party bodily injury and property damage and including coverage for onsite and offsite clean-up. To the maximum extent permitted by applicable law but no further, GOVERNMENT and CONTRACTOR, and their members, subsidiaries and affiliates, and the officers, directors, and employees of the foregoing shall each be named as an Additional Insured, but only with respect to liability caused by or arising out of the acts or omissions of SUBCONTRACTOR or its officers, employees or agents in the performance of ongoing operations for CONTRACTOR and GOVERNMENT. In addition, SUBCONTRACTOR'S insurer shall waive its right of subrogation against the Additional Insureds.
- (3) inspection, handling or removal of asbestos, SUBCONTRACTOR shall also carry Asbestos Liability Insurance in an amount not less than \$5,000,000 per occurrence/annual aggregate. The policy shall be written on an "Occurrence Basis" with no sunset clause. To the maximum extent permitted by applicable law but no further, such insurance shall name CONTRACTOR and GOVERNMENT, and their members, subsidiaries and affiliates, and the officers, directors, and employees of the foregoing each as Additional Insureds, but only with respect to liability caused by or arising out of the acts or omissions of SUBCONTRACTOR or its officers, employees or agents in the performance of ongoing operations for CONTRACTOR and GOVERNMENT.
- (4) transporting hazardous substances, SUBCONTRACTOR shall also carry Business Automobile Insurance covering liability arising out of the transportation of hazardous materials in an amount not less than \$2,000,000 per occurrence. Such policy shall include Motor Carrier Endorsement MCS-90. NEITHER CONTRACTOR NOR GOVERNMENT IS TO BE NAMED AN ADDITIONAL INSURED FOR THIS POLICY.
- (5) treatment, storage or disposal of hazardous wastes, SUBCONTRACTOR shall furnish an insurance certificate from the designated disposal facility establishing that the facility operator maintains current Environmental Liability Insurance in the amount of not less than \$5,000,000 per occurrence/annual aggregate. SUBCONTRACTOR shall also carry Pollution Liability in an amount not less than \$2,000,000 per occurrence or claim/annual aggregate as required in subsection (c)(2) above. Coverage shall also include non-owned disposal site (NODS) coverage for losses at the Jobsite.
- (6) hauling of property worth in excess of \$300,000, SUBCONTRACTOR shall, unless provided by CONTRACTOR, also carry "All Risk" Transit Insurance, or "All Risk" Motor Truck Cargo Insurance, or such similar form of insurance that will insure against physical loss or damage to the property being transported, moved or handled by SUBCONTRACTOR pursuant to the terms of this subcontract. Such insurance shall provide a limit of not less than the replacement cost of the highest value being moved. Additionally, to the maximum extent permitted by applicable law but no further, shall insure the interest of CONTRACTOR and GOVERNMENT and their members, subsidiaries and affiliates, and the officers, directors, and employees of the foregoing each as their respective interests may appear, but only with respect to liability caused by or arising out of the acts or omissions of SUBCONTRACTOR or its officers, employees or agents in the performance of ongoing operations for CONTRACTOR and GOVERNMENT. and shall include an insurer's Waiver of Subrogation in favor of each such party.

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- (d) The requirements contained herein as to types and limits, as well as CONTRACTOR'S approval of insurance coverage to be maintained by SUBCONTRACTOR, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by SUBCONTRACTOR under this subcontract. SUBCONTRACTOR shall require each lower-tier subcontractor to comply with all insurance requirements appropriate for its scope of work, and any deficiency shall not relieve SUBCONTRACTOR of its responsibility herein. Upon written request, SUBCONTRACTOR shall provide CONTRACTOR with complete, certified copies of all required insurance policies, and/or copies of lower-tier subcontractor certificates of insurance.

- (e) Submission of Insurance Certificates and Endorsements.

SUBCONTRACTOR shall deliver to CONTRACTOR no later than ten (10) calendar days after subcontract award, but in any event prior to commencing the Work or entering the Jobsite, (1) certificates of insurance providing clear evidence that the coverages and at least the minimum limits of insurance are in full force and effect; and (2) copies of endorsements or analogous insurance policy documents certified by SUBCONTRACTOR's insurer that meet all applicable Additional Insured and Waiver of Subrogation requirements prescribed by this clause. SUBCONTRACTOR shall deliver to CONTRACTOR thirty (30) calendar days advance written notice prior to cancellation, termination or material alteration of said policies of insurance. Certificates shall identify on their face the project name and the applicable subcontract number. Delivery of certificates, endorsements and any notices of policy change shall be made to the Subcontract Administrator identified in clause SC-2 AUTHORITY OF PERSONNEL.

- (g) Non-Waiver and Other Conditions.

- (1) CONTRACTOR'S acceptance of any evidence of insurance, including any certificate of insurance, shall not: (i) constitute acceptance of the adequacy of SUBCONTRACTOR'S insurance coverage, (ii) imply that any insurance coverage provided by SUBCONTRACTOR complies with the requirements of this subcontract, (iii) be deemed as a modification of any of SUBCONTRACTOR'S requirements in the subcontract, or (iv) waive CONTRACTOR'S or the GOVERNMENT'S rights to enforce any of SUBCONTRACTOR'S requirements in this subcontract, including the requirements concerning insurance coverage amounts, insurance terms and conditions and qualifications of insurance companies.
- (2) The requirements contained herein as to types and limits, as well as CONTRACTOR'S approval of insurance coverage to be maintained by SUBCONTRACTOR, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by SUBCONTRACTOR under this subcontract.
- (3) Neither CONTRACTOR nor GOVERNMENT is maintaining any insurance on behalf of SUBCONTRACTOR covering against loss or damage to the Work or to any other property of SUBCONTRACTOR.

SC-13A MEASUREMENT FOR PAYMENT (Jun 2009)

- (a) SUBCONTRACTOR shall submit an invoice upon completion of each Payment Milestone. The amount due and payable shall be in accordance with the price set forth in Exhibit C and the applicable milestone acceptance criteria of the subcontract.
- (b) SUBCONTRACTOR shall make all necessary measurements and conduct all tests and performance demonstrations required to establish each Payment Milestone has been satisfactorily accomplished. SUBCONTRACTOR shall notify CONTRACTOR prior to the time such measurements, tests or demonstrations are made or conducted. CONTRACTOR, at its discretion, may witness and verify such measurements, tests or demonstrations. Copies of all

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SUBCONTRACTOR'S records made for the purpose of determining Payment Milestone completion shall be furnished to CONTRACTOR upon request.

SC-24 TECHNICAL DATA RIGHTS (Jun 2009)

CONTRACTOR and GOVERNMENT shall have, and SUBCONTRACTOR hereby grants CONTRACTOR and GOVERNMENT, a permanent, assignable, non-exclusive, royalty-free license to use any concept, product, process (patentable or otherwise), copyrighted material (including without limitation documents, specifications, calculations, maps, sketches, notes, reports, data, models, samples, drawings, designs, and electronic software) and confidential information owned by SUBCONTRACTOR upon commencement of the Work under this subcontract and used by SUBCONTRACTOR or furnished or supplied to CONTRACTOR or GOVERNMENT by SUBCONTRACTOR in the course of performance under this subcontract.

SC-103 KEY PERSONNEL (Jun 2009)

SUBCONTRACTOR shall not reassign or remove the key personnel listed below without the prior written authorization of CONTRACTOR. The key personnel listed below are an essential and material consideration for this subcontract. Any change to Key Personnel will be required to meet minimum qualifications listed herein and is subject to CONTRACTOR approval.

<u>Name</u>	<u>Title/Position</u>
TBD	Technical Project Leader
*	*

SC-105 LIMITATION OF FUNDS (Aug 2014)

- (a) The amount of funds presently available for payment by CONTRACTOR and allotted to this subcontract is * (\$*). SUBCONTRACTOR shall perform or have performed Work up to the point at which the total amount paid and payable approximates, but does not exceed the total amount actually allotted.
- (b) CONTRACTOR will allot additional funds incrementally to the subcontract up to the full subcontract ceiling, provided funds are made available by GOVERNMENT. Directed Change Orders issued under the Changes clause shall not be considered an authorization to exceed the allotted amount.
- (c) SUBCONTRACTOR shall notify CONTRACTOR in writing whenever it has reason to believe that the amount to be invoiced under this subcontract in the next 30 days, when added to all previously invoiced amounts, will exceed 80% of the total funds so far allotted. Upon notification, CONTRACTOR will allot additional funds or may suspend or terminate the subcontract in accordance with its terms.
- (d) SUBCONTRACTOR is not authorized to continue performance or otherwise incur costs in excess of the allotted funds, unless one of the following exceptions applies: (1) if required to protect and maintain the Work in accordance with General Condition GC-44 SUSPENSION; or (2) protect and preserve the property related to this subcontract in accordance with GC-47(x) TERMINATION FOR CONVENIENCE.

SC-112 REGIONAL PURCHASING PRICING PREFERENCE (Apr 2014)

SUBCONTRACTOR shall maximize procurement opportunities for Northern New Mexico (NNM) small business concerns by implementing a Regional Purchasing Pricing Preference when procuring goods or services for this subcontract exceeding \$100,000. The price preference will be given by adding a 10% adjustment factor to the price/cost including priced options of a proposed lower-tier subcontractor that

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does not meet the definition of a NNM small business concern, when evaluating such bid/offer against other bids/offers received for the same goods or services.

NNM includes the counties of Taos, Santa Fe, Rio Arriba, Sandoval, Mora, San Miguel, and Los Alamos, and the eight regional Pueblos of Nambe, Ohkay Owingeh (formerly known as San Juan), Picuris, Pojoaque, San Ildefonso, Santa Clara, Taos, and Tesuque.

A NNM business concern is a business that is actively engaged in doing business in NNM, has an operative business location in NNM, and uses labor from NNM. To meet these requirements, a business must be able to demonstrate, if and when requested, through the submission of New Mexico gross receipts tax and unemployment compensation tax forms or otherwise, that for the calendar year preceding the submission of its bid/offer:

- (a) it has been properly authorized to do business and has been operating in NNM with a staff of three or more full time equivalent employees (of which 51% must reside in NNM), and that it currently has a facility in NNM that can support the business activity contemplated by the Statement of Work / Scope of Work; or
- (b) it has historically operated in NNM with two or less full time equivalent employees who reside in NNM, it is independently owned (i.e., its owner(s) exercise(s) close control over operations and decisions which are not subject to control or the power to control by others), its majority ownership interest is held by residents of NNM, it has been properly authorized to do business in NNM and it currently has a facility in NNM that can support the business activity contemplated by the Statement of Work / Scope of Work.

SUBCONTRACTOR shall report to CONTRACTOR, on April 30th and October 30th throughout the term of this subcontract, the results of its efforts to maximize procurement opportunities for NNM small business concerns. In addition, SUBCONTRACTOR shall submit a final report to CONTRACTOR at the completion/expiration of its subcontract.

SC-112A TRIAD PUEBLO BUSINESS ALLIANCE (Nov 2018)

SUBCONTRACTOR shall maximize procurement opportunities for economic development companies representing the Ohkay Owingeh, San Ildefonso, and Acoma pueblos by implementing a pricing preference when procuring goods or services for this subcontract. The price preference will be given by providing a price evaluation discount of 5% to participating Pueblo companies, when evaluating such bid/offer against other bids/offers received for the same goods or services.

SC-113 SUBCONTRACTOR'S REGIONAL AND COMMUNITY DEVELOPMENT PLAN (Jun 2009)

- (a) SUBCONTRACTOR will begin developing a Subcontractor's Regional and Community Development Plan (SRCDP) immediately upon notice of award and shall deliver its proposed SRCDP to the CONTRACTOR for review and approval within 60 days after notice of award. The SUBCONTRACTOR'S approved SRCDP shall be incorporated into the subcontract by reference through a subcontract modification, and shall apply with the same force and effect as if incorporated in full text.
- (b) During performance of the subcontract, the SUBCONTRACTOR shall maintain records, including receipts, payroll information, and any other documents that demonstrate SUBCONTRACTOR'S compliance with its SRCDP. SUBCONTRACTOR shall submit reports to CONTRACTOR semi-annually documenting its compliance with its SRCDP and, if requested by CONTRACTOR, shall provide evidence to substantiate any statement contained in a report.

SC-114 SUBCONTRACTOR'S SMALL BUSINESS SUBCONTRACTING PLAN (Nov 2018)

- (a) Unless exempt, SUBCONTRACTOR shall comply with the requirements set forth in Appendix SFA-1, FAR clause 52.219-9, Small Business Subcontracting Plan. SUBCONTRACTOR'S Small

Dated 11/20/2018

Business Subcontracting Plan (Plan) is subject to CONTRACTOR'S approval, and once approved is incorporated into this subcontract by reference as if fully set forth herein.

- (b) Subcontracting reports shall be submitted on the Individual Subcontracting Report (ISR) and the Summary Subcontracting Report (SSR) in accordance with the instructions on the Electronic Subcontracting Reporting System (eSRS) website at <http://www.esrs.gov>. SUBCONTRACTOR shall ensure that its lower-tier subcontractors with subcontracting plans submit the ISR and/or the SSR using eSRS.
- (c) ISR data must be submitted online at <http://www.esrs.gov> semi-annually during subcontract performance for the periods ending March 31 and September 30. A report is also required for each subcontract within 30 days of subcontract completion. Reports are due 30 days after the close of each reporting period. Reports are required when due, regardless of whether there has been any subcontracting activity since the inception of the subcontract or the previous reporting period.
- (d) SSR data must be submitted online at <http://www.esrs.gov> annually for the twelve month period ending September 30. Reports are due 30 days after the close of each reporting period.
- (e) Failure of SUBCONTRACTOR to comply in good faith with its CONTRACTOR-approved Plan and the above reporting requirements may be considered a material breach of this subcontract and constitute grounds for termination.

SC-143 OPTION TO EXTEND TERM OF SUBCONTRACT (Jan 2010)

CONTRACTOR may extend the term of this subcontract by giving written notice to SUBCONTRACTOR by the date specified as the expiration date of this subcontract. CONTRACTOR shall attempt to give SUBCONTRACTOR a preliminary written notice of its intent to extend the term of this subcontract at least 60 days before the then current expiration date; however, the preliminary notice shall not be a commitment by CONTRACTOR to extend the term of this subcontract. Failure to provide the preliminary notice at least 60 days before the current expiration date does not prevent CONTRACTOR from the exercise of an option. The exercise of an option to extend the term of this subcontract shall be accomplished by a unilateral written modification issued by CONTRACTOR.

The term of this subcontract may be extended pursuant to this clause for up to * (*) months beyond the initial term. Such extension may be made from time to time or in one modification. However, the total duration of this subcontract, including the exercise of options under this clause, shall not exceed * (*) months.

SC-143A EXERCISE OF OPTIONS (Nov 2017)

This subcontract consists of a base scope of work and options for additional work which may be exercised by CONTRACTOR. The options are specified in Exhibit C Form A of this subcontract.

CONTRACTOR is not obligated to exercise any option identified in this subcontract. If CONTRACTOR decides to exercise an option, a formal modification will be issued by CONTRACTOR to that effect.

SC-156 AVAILABILITY OF FUNDS (MAR 2014)

Funds are not presently available for performance under this subcontract beyond U.S. Government fiscal year *. CONTRACTOR'S obligation for performance of this subcontract beyond that fiscal year is contingent upon the availability of Government appropriated funds each fiscal year thereafter and the transfer of those funds by DOE/NNSA to CONTRACTOR. If such appropriations or transfers are not made, CONTRACTOR shall have the right to terminate this subcontract without penalty by giving SUBCONTRACTOR prompt written notice thereof.

Dated 11/20/2018

SC-200 U.S. NATIONAL LABORATORIES AND AGENCIES (JUN 2016) (ADDED)

The SUBCONTRACTOR recognizes that work performed under this Subcontract is of interest not only to Triad but to other U.S. national laboratories and agencies as well. The SUBCONTRACTOR agrees that Triad may share and otherwise distribute deliverables, information, data, software, and any correspondence provided by SUBCONTRACTOR under this Subcontract with personnel at the U.S. national laboratories and agencies identified below:

- National Technology and Engineering Solutions of Sandia, LLC, manager and operator of Sandia National Laboratory (SNL)
- The Regents of the University of California, manager and operator of Lawrence Berkeley National Laboratory (LBNL)
- Lawrence Livermore National Security, LLC, manager and operator of Lawrence Livermore National Laboratory (LLNL)
- UChicago Argonne, LLC, manager and Operator of Argonne National Laboratory (ANL)
- UT-Battelle, LLC, manager and operator of Oak Ridge National Laboratory (ORNL)
- U.S. Department of Energy, National Nuclear Security Administration (NNSA)
- U.S. Department of Energy, Office of Science (DOE SC)

The Special Condition does not in any way limit or restrict Triad or the Government's rights set forth herein.

SC-201 STATEMENT OF WORK CONFIGURATION REVIEW (JUN 2016) (ADDED)

- (a) The Crossroads System is described in Exhibit "D" Scope of Work and Technical Specifications.
- (b) Upon completion of deliverables prescribed for Subcontract TBD with SUBCONTRACTOR. Contractor AND subcontractor shall determine a configuration for the Crossroads System based on the Systems as described in Exhibit "D", results of the Long Form Services subcontract, industry product roadmaps, and other factors as mutually agreeable.
 - (1) The affirmation of an agreed upon configuration for the Crossroads System will be documented through bilateral modification of revisions to Exhibit "D".
 - (2) Upon completion of the bilateral modification to document the configuration for the Crossroads System, CONTRACTOR will authorize SUBCONTRACTOR in writing to acquire the parts necessary to build the Crossroads System. Parts include, but are not limited to, processors and interconnect ASIC's, memory chips or DIMMS, PCB's, optical component cables, empty racks, cooling equipment, power supplies, fans, and fully or partially integrated built racks of parts. The expressed written approval of the CONTRACTOR's authorized representative is required before SUBCONTRACTOR is permitted to acquire parts for the Crossroads System.
- (c) CONTRACTOR and SUBCONTRACTOR agree to share the price risk for memory in the Crossroads System. In exchange for this memory price risk sharing, SUBCONTRACTOR agrees to disclose actual cost information for memory (i.e., the sum of the actual cost SUBCONTRACTOR will pay its supplier for memory and SUBCONTRACTOR's allocable indirect costs) to CONTRACTOR prior to purchasing Crossroads System memory parts. The fixed price of this Subcontract is based on the total of TBD TibiBytes (TiB) of DDR4 SDRAM for Crossroads at the

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total estimate price of \$TBD, or \$TBD per GibiByte (GiB). Similarly, the fixed price of this Subcontract is based on the total of TBD TibiBytes (TiB) of NVRAM for Crossroads at the total estimated price of \$TBD, or \$TBD per GibiByte (GiB). If the actual memory price is more than 5% above or below this estimate when the SDRAM and NVRAM need to be purchased to build Crossroads, the parties agree to negotiate a mutually acceptable memory price estimate and either change the total fixed price of this Subcontract accordingly or change the Crossroads System deliverables accordingly.

If CONTRACTOR obtains substantive information indicating SUBCONTRACTOR's memory pricing may not represent a fair and reasonable market price, CONTRACTOR will share this information with SUBCONTRACTOR. If CONTRACTOR and SUBCONTRACTOR cannot agree on an equitable change to the Subcontract, CONTRACTOR may elect, by written notice to SUBCONTRACTOR within 14 days, to purchase the SDRAM and/or NVRAMM itself and furnish it to SUBCONTRACTOR.

SC-202 SHIPPING / DELIVERY (JUN 2016) (ADDED)

- (a) Shipping Terms – SUBCONTRACTOR shall ship all items FOB Destination, freight included/prepaid. All shipments shall be shipped via SUBCONTRACTOR's vehicles or a licensed common carrier selected by SUBCONTRACTOR, at SUBCONTRACTOR's expense.
- (b) Delivery Address – All Shipment shall be coordinated through the individual identified above in SC-2 (b) as the Triad Subcontract Technical representative and shall be delivered in accordance with his instruction and schedule to the following address:

Metropolis Computing Center
TA 03, Building 2327, Room 2405
Los Alamos National Laboratory
Los Alamos, NM 87545

Dated 11/20/2018

**EXHIBIT B
APPENDIX B-2**

LOS ALAMOS NATIONAL LABORATORY

SMALL BUSINESS SUBCONTRACTING PLAN

SUBCONTRACTOR'S small business subcontracting plan dated * is attached and incorporated into this subcontract.

Dated 11/20/2018

EXHIBIT "C" FORM A QUANTITIES AND PRICING SCHEDULE

NOTE:

This Exhibit "C" Form A is part of the model subcontract for Crossroads and is provided to Offerors for informational purposes only. It is not intended that this form be returned with the Offeror's proposal.

1.0 WORK TO BE PERFORMED

Work shall be performed strictly in accordance with requirements of the Subcontract Documents.

2.0 UNIT PRICES

- a. Pricing for the Crossroads system is detailed on the Subcontract Form of Agreement. All amounts stated in the Pricing detail are fixed for the duration of the Subcontract and are not subject to escalation for any cause. Payment for these Pricing amounts shall constitute full payment for performance and acceptance of the Work and covers all costs of whatever nature incurred by SUBCONTRACTOR in Work and covers all costs of whatever nature incurred by SUBCONTRACTOR in accomplishing the Work in accordance with the provisions of this Subcontract.
- b. SUBCONTRACTOR shall maintain all work in progress until it is accepted. SUBCONTRACTOR shall repair, rework or replace as necessary any work damaged or lost due to normal wear and tear, anticipated events, or conditions within its control. No separate payment shall be made for such maintenance costs which are deemed included in the original Subcontract Pricing. Any failure to maintain the Work shall be considered a defect in accordance with the General Condition titled "WARRANTY."
- c. The subcontract's Milestone and Payment Schedule for the Crossroads System is contained in Exhibit "C" Form B Milestone and Payment Schedule.

3.0 OPTIONS

CONTRACTOR may, at any time between the commencement and completion of the subcontract, exercise the options priced below. CONTRACTOR will give the subcontract, exercise the options priced below. CONTRACTOR will give the SUBCONTRACTOR preliminary written notice of the exercise of options approximately 60 days in advance of the exercise of any options. The preliminary notice shall be accomplished unilaterally, at the sole discretion of CONTRACTOR.

- a. Pricing for options shall be based on pricing stipulated below. Option prices shall not increase for the time between the commencement and completion of the subcontract.
- b. Delivery requirements for all options will be negotiated at the time the option is exercised.
- c. CONTRACTOR reserves the right to exercise any one or all of the options multiple times between the commencement and completion of the subcontract.
- d. CONTRACTOR reserves the right to exercise options with lesser requirements or to split the requirements into multiple awards with lesser requirements.

Dated 11/20/2018

Option Description	Exhibit "D" Reference	Price

Dated 11/20/2018

**EXHIBIT "C" FORM B
MILESTONE AND PAYMENT SCHEDULES**

NOTE:

This Exhibit "C" Form B is part of the model subcontract for Crossroads and is provided to Offerors for informational purposes only. It is not intended that this form be returned with the Offeror's proposal.

The following Milestone and Payment Schedule is established pursuant to Exhibit "B" Special Conditions SC-3A and SC-13A:

No.	Milestone Description	Subcontract Schedule (# of months after Notice to Proceed)	Payment Amounts
1.0	Initial Milestone		\$ TBD
2.0	<i>(continue as necessary)</i>		TBD
-	*		"
-	*		"
-	*		"
-	*		"
-	*		"
-	<i>Final Milestone</i>		"
-	TOTAL OF PAYMENTS		\$ TBD

SUBCONTRACTOR'S invoices will issue on Completion Dates and in the Payment Amounts established above. In the event SUBCONTRACTOR completes a Milestone prior to the associated Completion Date, CONTRACTOR is not obligated to accept the related invoice or make a payment associated with that Milestone until the stated Completion Date.

Immediately save this document to your local drive before proceeding.

Save

EXHIBIT F**Environmental, Safety, and Health Requirements for
High or Moderate Consequence Work
Construction, Demolition, Remediation, Maintenance, Repair or Service**

574468

Requisition Number**Subcontract Number**

This document establishes the Environmental, Safety, Health, and Waste Management requirements for High or Moderate Consequence Work. To perform subcontract work at LANL, SUBCONTRACTOR is required to comply with CONTRACTOR's 10 CFR 851, Worker Safety and Health Program, environmental permits, agreements, orders, and waste management processes the requirements of which are set forth in this Exhibit. To the extent that the Exhibit requires the submission of supplementary SUBCONTRACTOR's Site-Specific ES&H plans, the SUBCONTRACTOR shall consolidate such ES&H plan elements and submit the complete SUBCONTRACTOR's Site-Specific ES&H Plan to the CONTRACTOR where required.

The SUBCONTRACTOR's Site Specific ES&H Plan shall be submitted to the CONTRACTOR for review and must be approved prior to issuance of Notice to Proceed. Submittal of the SUBCONTRACTOR's corporate or company ES&H Plan/Procedure/Policy is not an acceptable alternative to a Site-Specific ES&H Plan that is specific to the Scope of Work and associated consequences for the work under this Contract at the Los Alamos National Laboratory.

Note: The CONTRACTOR will subject scopes of work as defined in P351, **Permits and Requirements Identification**, Section 2.2 - Applicability to review using the LANL Integrated Review Tool (IRT) and attach those requirements to Exhibit D Scope of Work: Laboratory Requirements. Should requirements between this attachment and Exhibit F be found, then the requirements so stated in Exhibit D will be governing.

Q1 Is this work Construction, Demolition, Remediation or contain elements of these types of work?

☐ Yes ☒ No

Q2 Does the work scope include any of the following?

- Work on live electrical equipment
- Work on adjacent, identical, live/de-energized electrical equipment
- Hoisting and rigging potentially requiring Critical Lifting IAW DOE STD-1090-2007 or 2011
- Any other work representing a high hazard/complex (consequence) in P300 Integrated Work Management Hazard Grading Table (Table B1 Number 1)

☐ Yes ☒ No

This Work is Moderate Consequence

Q3 Is this work scope for the installation, maintenance, or warranty work on programmatic equipment?

☒ Yes ☐ No

The work scope MAY NOT include the following:

- Powered Industrial Equipment / Major Equipment

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- Outdoor Work in Inclement Weather Conditions
- Scaffolding
- Penetrations of Floors Walls, Ceilings, or Blind Penetrations
- Excavation, Trenching and/or Soil Disturbance
- Cranes, Hoists, Lifting Devices and Rigging Equipment
- Suspended Personnel Platforms
- Traffic or Pedestrian Control
- Wastewater Discharges
- Storm Water Management
- Air Emissions / Sources Requiring Separate Permitting
- Pesticide or Herbicide Application
- Construction, Demolition, or Renovation

Q4 Does the scope, hazards, duration and independence of subcontracted work (unescorted access, round the clock service availability without escort, etc.) of the scope of work require a Site-Specific ES&H Plan to address hazards and controls?

☒ Yes ☐ No

GENERAL REQUIREMENTS

The following clauses ALWAYS apply and are made part of the Subcontract.

No.	Title
F1.0	General Requirements
F2.0	Subcontractor's Site-Specific ES&H Plan
F3.0	Subcontractor and Lower-Tier Subcontractor Minimum Performance Eligibility
F5.0	Incident or Injury Illness Recordkeeping and Reporting Requirements
F6.0	Injury/Illness Record-keeping and Reporting (SUBCONTRACTOR is required to report all job related injuries and illnesses, regardless of severity, immediately to the STR using DOE F 5484.3.) (SUBCONTRACTOR is also required to submit a weekly productive man-hours report to the STR every Monday for the preceding week using Attachment F6-1, Weekly Productive Man Hour Report.) The STR must send this information to LANL OSH-OH, MS K485 per Contractor provided guidance.
F7.0	Employee Training
F8.0	ES&H Meetings/Pre-job Briefings/Daily Briefings
F9.0	ES&H Inspections
F10.0	Housekeeping
F11.0	Emergency Preparedness Requirements (SUBCONTRACTOR shall submit, as part of the Site-Specific ES&H Plan, Emergency Procedures.)
F12.0	Personal Protective Equipment
F15.0	Occupational Medicine (OM) Services
F17.0	Tools and Equipment
F20.0	Work Management (SUBCONTRACTOR must submit Attachment F20-1, the Integrated Work Document Form 2100A, to the CONTRACTOR's ES&H representative and the STR/requester for approval.)
F38.0	Pollution Prevention/Waste Minimization
F39.0	Waste Management/Disposal
F40.0	Reserved
F42.0	Spill Prevention, Reporting and Response
F48.0	Reserved
F59.0	Safety and Environmental Performance
F62.0	Attachments

SPECIAL REQUIREMENTS

The following clauses apply based on the Nature and Scope of Work.

The STR/Requestor will answer questions and provide information to the best of their knowledge based on the nature and scope of work. Where a question is selected or answered Yes, the referenced clause applies and is made part of the Subcontract. If the question is not selected or answered No, the referenced clause is NOT part of the Subcontract.

F4.0 Subcontractor ES&H Representative Duties and Responsibilities☒ **ES&H Representative - Option C**

Option for subcontracts with lower risk factors and smaller dollar values. (Subclauses F4.11 - F4.14)

NOTE: Submittal of the qualifications of the ES&H Professional, the ES&H Specialist or Representative, and/or the Environmental Professional must be approved by the Contractor prior to the issuance of the Notice to Proceed.

F13.0 Respiratory Protection

☐ Yes ☒ No

F14.0 Hearing Conservation Program

☒ Yes ☐ No

14.1 If yes, SUBCONTRACTOR shall submit, as part of the Site-Specific ES&H Plan, a Hearing Conservation Program.

F19.0 Chemical and Hazardous Materials Management

☐ Yes ☒ No

F22.0 Welding, Cutting, Brazing, and Grinding

☐ Yes ☒ No

F23.0 Fall Prevention/Protection Program

☐ Yes ☒ No

F25.0 Portable Ladders

Will the work involve the use of portable ladders?

☒ Yes ☐ No

F29.0 Confined Spaces

☐ Yes ☒ No

F30.0 Lockout/Tagout

Will the work require the use of Lock-out/Tag-out?

☐ Yes ☒ No

F34.0 Aerial Work Platforms

☐ Yes ☒ No

F35.0 Pressure Safety Including Compressed Gases

☐ Yes ☒ No

F36.0 Electrical Safety

Will there be electrical work or electrical testing performed?

☐ Yes ☒ No

Will there be work that involves other special electrical hazards (Direct Current, Radio Frequency Current (3 kHz – 300 GHz), Variable Frequency Drives, Storage Batteries and Uninterruptible Power Supplies, Capacitors, Inductors or Research and Development Equipment)?

☐ Yes ☒ No

F39.0 Waste Management/Disposal

☐ Yes ☒ No

F49.0 Radiological Requirements

☐ Yes ☒ No

F50.0 Radioactive Sealed Sources and/or Radiation Generating Devices

☐ Yes ☒ No

F53.0 Beryllium

☐ Yes ☒ No

F55.0 Heavy Metals

☐ Yes ☒ No

F57.0 Biological Safety

☐ Yes ☒ No

F58.0 Laser Safety

☐ Yes ☒ No

F60.0 Refrigerants

☐ Yes ☒ No

F61.0 Demolition, Remodeling or Renovation

☐ Yes ☒ No

Site Entry Requirements or Area Hazards and Controls

CONTRACTOR STR/Requester shall complete Attachment F1-0, Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Non-Tenant Activity (Form 2101).

Note: *If there are Site Entry Requirements or Area Hazards and Controls, Form 2101 must be completed and included in the work package by the STR/Requester.*

Required Signatures

Note: Place N/A and initials when a representative signature is not required.

Subcontract Technical Representative/Requestor

James W. Lujan Printed Name	James Westley Lujan Digitally signed by James Westley Lujan Date: 2018.07.11 15:58:27 -06'00' Signature
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Safety Representative

Vanessa Richardson Printed Name	VANESSA RICHARDSON (Affiliate) Digitally signed by VANESSA RICHARDSON (Affiliate) Date: 2018.07.10 14:09:55 -06'00' Signature
------------------------------------	--

IH Representative

NA Printed Name	 Signature
--------------------	---------------

RP Representative

NA Printed Name	 Signature
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Deployed Environmental Professional

Leonard F. Sandoval Printed Name	Leonard F. Sandoval Digitally signed by Leonard F. Sandoval Date: 2018.07.10 14:26:37 -06'00' Signature
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EXHIBIT "F"

ENVIRONMENTAL, SAFETY, AND HEALTH REQUIREMENTS PART I: COMMON CLAUSES

Note: References herein to 10 CFR 851 or subparts thereof refer to Title 10 of the Code of Federal Regulations, Part 851 Worker Safety and Health Program.

F1.0 General Requirements

- 1.1 For the purpose of this Exhibit, environmental, safety, and health (ES&H) protection encompasses industrial hygiene and safety, and environmental protection, compliance, pollution prevention, and waste management/minimization. The term "SUBCONTRACTOR" includes the SUBCONTRACTOR, its employees and any sub-tier subcontractors and their employees. The term "GOVERNMENT" for the purposes of this Exhibit applies to agencies and personnel of the United States Government, such as the Department of Energy (DOE), the National Nuclear Security Administration (NNSA), and the Department of Defense (DoD).
- 1.2 SUBCONTRACTOR shall have sole responsibility for implementing the SUBCONTRACTOR's written Site-Specific ES&H plan as approved by the CONTRACTOR. Neither the CONTRACTOR nor the GOVERNMENT shall be responsible for supervising the implementation of SUBCONTRACTOR's Site-Specific ES&H plan and neither CONTRACTOR nor the GOVERNMENT shall have responsibility for the safety and environmental compliance of the SUBCONTRACTOR, its employees or its lower-tier suppliers' or subcontractors' employees. The SUBCONTRACTOR shall not commence work on site until the SUBCONTRACTOR's written Site-Specific ES&H plan is approved by the CONTRACTOR and a Notice to Proceed has been received by the SUBCONTRACTOR.
- 1.3 When performing work at sites controlled/managed by CONTRACTOR or the GOVERNMENT, the SUBCONTRACTOR shall comply with all applicable Federal, State, and Local laws and regulations protecting workers, air, water, soil, and those governing land use, waste management/disposal, and chemical and pesticide usage.
- 1.4 The requirements for the SUBCONTRACTOR in accordance with CONTRACTOR's 10 CFR 851, Worker Safety and Health Program are contained in this Exhibit. Nothing in this Exhibit must be construed as relieving SUBCONTRACTOR from complying with any additional specific safety and health requirement that SUBCONTRACTOR determines to be necessary to protect the safety and health of workers. Some, but not all of the 10 CFR 851 requirements are set forth in this Exhibit. Even if not specifically set forth in this Exhibit, SUBCONTRACTOR is required under 10 CFR 851 to comply with the following regulations and safety and health standards that are applicable to the hazards of its work:
 - 10 CFR 850, Chronic Beryllium Disease Prevention Program
 - 29 CFR Part 1904.4 through 1904.11, 1904.29 through 1904.33, 1904.44 and 1904.46 – Recording and Reporting Occupational Injuries and Illnesses
 - 29 CFR Part 1910, Occupational Safety and Health, excluding 1910.1096, Ionizing Radiation
 - 29 CFR Part 1926, Safety and Health Regulations for Construction

- 29 CFR Part 1928, Occupational Safety and Health Standards for Agriculture
- American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices" (2005)
- ANSI Z88.2, Respiratory Protection (1992)
- ANSI Z136.1, Safe Use of Lasers (2000)
- ANSI Z49.1, Safety in Welding, Cutting and Allied Processes, Sections 4.3 and E4.3 (1999)
- NFPA 70E, Standard for Electrical Safety in the Workplace (2015)
- American Society of Mechanical Engineers (ASME) Boilers and Pressure Vessel Code, Sections I through XII, including applicable Code Cases, (2004)
- ASME B31 (ASME Code for Pressure Piping) as follows:
 - B31.1-2001-Power Piping, and B31.1a-2002 Addenda to ASME B31.1-2001;
 - B31.2-1968-Fuel Gas Piping;
 - B31.3-2002-Process Piping;
 - B31.4-2002-Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids;
 - B31.5-2001-Refrigeration Piping and Heat Transfer Components, and B31.5a-2004, Addenda to ASME B31.5-2001;
 - B31.8-2003-Gas Transmission and Distribution Piping Systems;
 - B31.8S-2001-Managing System Integrity of Gas Pipelines;
 - B31.9-1996-Building Services Piping;
 - B31.11-2002-Slurry Transportation Piping Systems; and
 - B31G-1991-Manual for Determining Remaining Strength of Corroded Pipelines.
- DOE Manual 231.1B, Environment, Safety and Health Reporting Manual, May 13, 2013
- DOE Standard DOE-1212-2012, Explosives Safety, June 2012

- 1.5 In accordance with 10 CFR 851.10(a), the SUBCONTRACTOR must provide a place of employment that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm.
- 1.6 SUBCONTRACTOR shall have responsibility for taking action as is necessary to assure compliance with state and federal environmental laws, Laboratory environmental and waste management requirements identified in Exhibit D Statement of Work; and Department of Energy Orders related to environmental compliance and waste management. Where determined necessary by the scope, nature, location, or methods of work the requirements contained in this Exhibit F will be supplemented by the CONTRACTOR through attachment of the results generated by the LANL Integrated Review Tool (IRT) to Exhibit D Statement of Work; **Laboratory Requirements**.
- 1.7 In the event of any SUBCONTRACTOR non-compliance, including environmental or waste management violations, all such measures taken by the CONTRACTOR to correct the violations shall be at the SUBCONTRACTOR's expense, and the cost thereof, including any stipulated penalties resulting from non-compliance, shall be deducted from payments otherwise due to SUBCONTRACTOR.
- 1.8 CONTRACTOR is dedicated to the concept that all accidents are preventable. Accordingly, CONTRACTOR is committed to a goal of zero accidents through continuous improvement practices. This "Zero Accident Performance" goal, including zero non-permitted releases and zero regulatory non-compliance with respect to protection of the environment, is an expectation

of all SUBCONTRACTORS in the performance of their work. In accordance with 10 CFR 851.20(a)(1), SUBCONTRACTOR shall adopt the following "Zero Accident Performance" objectives:

- 1.8.1 Strive to eliminate all injuries, illnesses, and adverse impacts to the environment.
- 1.8.2 Promote environment, safety, and health (ES&H) objectives as a constant value in designing, planning, training, and executing work through the Integrated Safety Management (ISM) process (see Subclauses F1.11 and F1.12).
- 1.8.3 Spread ownership for the ES&H program effectiveness throughout the SUBCONTRACTOR's teams.
- 1.8.4 Enhance employee awareness and involvement in their ES&H program implementation.
- 1.8.5 Enforce employees' consistent use of safe practices in their daily work activities.
- 1.8.6 Optimize the use of continuous improvement practices as the basis for "Zero Accident Performance" initiatives.
- 1.8.7 Demonstrate to CONTRACTOR that SUBCONTRACTOR is dedicated to safety and environmental compliance excellence.
- 1.8.8 Expect senior management to demonstrate leadership and direction for "Zero Accident Performance" implementation.
- 1.8.9 Ensure all SUBCONTRACTOR employees are empowered to implement and consistently strive for the "Zero Accident Performance" goal.
- 1.8.10 Ensure SUBCONTRACTOR management is accessible to employees for ES&H concerns.
- 1.8.11 SUBCONTRACTOR workers may report safety, health, or environmental concerns to the LANL Safety Concerns Hotline at 505-665-7233 (email safety@lanl.gov), or to the DOE Los Alamos Field Office at 505-606-0873, or to the DOE Albuquerque Employee Concerns Hotline at email: ecp@doeal.gov or 1-800-688-5713.

In accordance with DOE O 442.2 Chg 1 Differing Professional Opinions for Technical Issues involving Environmental, Safety, and Health Technical Concerns, if a SUBCONTRACTOR worker has a differing professional opinion on a technical issue related to environment, safety and health, it can be reported to:

Jeffry Roberson, Deputy Associate Administrator for Safety (NA-51/FORS)
National Nuclear Security Administration, U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
Email Jeffry.Roberson@nnsa.doe.gov or call 301-903-9228

The DPO process and DPO Submittal Form may be found at: <http://www.energy.gov/ehss/doe-differing-professional-opinions>.

1.8.12 SUBCONTRACTOR and CONTRACTOR workers have the right and responsibility to Pause Work or, if necessary, Stop Work in accordance with 10 CFR 851.20(a)(9) and LANL Policy without fear of reprisal when:

- There is a reasonable belief that the task poses an imminent risk of death, serious physical harm, or other serious hazard to workers where the workers believe there is insufficient time to utilize normal hazard reporting and abatement procedure.
- There is a reasonable belief that the work poses a potential uncontrolled environmental risk or violates the requirements of applicable laws or permits.
- There is a reasonable belief that security of the Laboratory, information, or Government property could be compromised.
- Work controlling and execution Information, instructions, or worker training is inadequate to execute the work safely and securely.

1.8.13 CONTRACTOR ES&H personnel may Pause or Stop SUBCONTRACTOR work at any time when conditions such as those in 1.8.12 are observed or when it is necessary to prevent the SUBCONTRACTOR's activities from creating an uncontrolled hazard to collocated workers or to prevent / terminate an environmental, health, or safety violation.

- 1.9 In accordance with 10 CFR 851.20(a)(10) and 851.20(b)(2)(iv), SUBCONTRACTOR shall inform workers of their rights and responsibilities by appropriate means, including posting the U.S. Department of Energy/LANL "Worker Protection at Los Alamos National Laboratory" poster in the workplace where it is visible to all workers. In accordance with 10 CFR 851.20(b)(2), SUBCONTRACTOR shall allow workers to have access to DOE Safety and Health publications; the 10 CFR 851 Worker Safety and Health Program for the covered workplace; the standards, controls, and procedures applicable to the covered workplace; limited information on any recordkeeping log (OSHA Form 300); and DOE Form 5484.3 (the DOE equivalent to OSHA Form 301) on official time. SUBCONTRACTOR shall designate a location or contact information for workers to obtain this information.
- 1.10 In accordance with 10 CFR 851.20(b)(5), SUBCONTRACTOR shall ensure that employee representatives have the right to participate in inspections by DOE officials on official time.
- 1.11 In accordance with 10 CFR 851.11(a)(3)(ii), CONTRACTOR is committed to implementing an Integrated Safety Management System (ISMS) and Environmental Management System (EMS) that promotes CONTRACTOR's core values and the principles set forth by the U.S. Department of Energy (DOE). The objective of ISMS and EMS is to systematically integrate safety and environmental compliance into management and work practices at all levels so that workers, the public, and the environment are protected while assigned projects are accomplished.
- 1.12 In accordance with 10 CFR 851.11(a)(3)(ii), SUBCONTRACTOR shall perform work in a safe and compliant manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for safety and environmental compliance. SUBCONTRACTOR shall exercise a degree of care commensurate with the work and the associated hazards/risks. SUBCONTRACTOR shall ensure that management of ES&H functions and activities becomes an integral but visible part of SUBCONTRACTOR's work planning and execution processes. The following ISMS and EMS principles must be adhered to:

- 1.12.1 Line management is responsible for the protection of employees, the public, and the environment. Line management includes those SUBCONTRACTOR employees managing or supervising employees performing work.
- 1.12.2 Clear and unambiguous lines of authority and responsibility for ES&H matters are established and maintained at all organizational levels.
- 1.12.3 Personnel possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.
- 1.12.4 Resources are effectively allocated to address ES&H, programmatic, and operational considerations. Protecting employees, the public, and the environment is a priority whenever activities are planned and performed.
- 1.12.5 Before work is performed, the associated hazards/risks are evaluated and an agreed-upon set of ES&H controls and requirements is established which, if properly implemented, provide adequate assurance that employees, the public, and the environment are protected from adverse consequences.
- 1.12.6 In accordance with 10 CFR 851.22(b), administrative and engineering controls to prevent and mitigate hazards shall be tailored to the work being performed and associated hazards. Controls are established according to the following hierarchy:
- Hazard elimination by process modification;
 - Substitution of a less hazardous substance, if available;
 - Application of engineering controls such as enclosures, machine guards, interlocks, or similar devices;
 - Application of administrative controls, such as training, lockout/tag out, and procedures; and
 - Use of Personal Protective Equipment (PPE).
- 1.12.7 The conditions and requirements to be satisfied for operations to be initiated and conducted are established and agreed upon by the CONTRACTOR and SUBCONTRACTOR. These agreed upon conditions and requirements are requirements of the subcontract and binding upon the SUBCONTRACTOR. The extent of documentation and level of authority for agreement shall be tailored to the complexity, hazards, and environmental requirements associated with the work.
- 1.13 CONTRACTOR reserves the right to perform both announced and unannounced inspections and assessments of SUBCONTRACTOR's operations, equipment, and materials to verify compliance with the requirements of this subcontract. SUBCONTRACTOR shall cooperate and accommodate oversight assessments, audits, and inspections performed by the CONTRACTOR. The CONTRACTOR may invoke Stop Work at any time for violations of applicable laws and regulations.
- 1.14 In accordance with 10 CFR 851.20(a)(9), SUBCONTRACTOR shall ensure that workers have the authority and responsibility, and are encouraged to stop work when they discover unsafe conditions or other hazards. SUBCONTRACTOR shall ensure that work does not resume until the ES&H concerns associated with that activity are resolved. Restart of work activities may not

occur except as follows:

- 1.14.1 The worker shall correct the hazardous condition and restart the activity or operation without notifications if (1) the condition does not pose an imminent danger, (2) the condition can be corrected immediately, and (3) the worker has the resources to correct the condition and restart work.
- 1.14.2 In all other cases, the worker must notify the SUBCONTRACTOR ES&H Representative prior to restart.
- 1.14.3 If the SUBCONTRACTOR ES&H Representative is notified of a stop work initiated by a worker, the ES&H Representative shall notify the STR.
- 1.15 In accordance with 10 CFR 851.20(a)(4) the SUBCONTRACTOR will provide mechanisms to involve workers and their elected representatives in the development of the worker safety and health program goals, objectives, and measures and in the identification and control of hazards in the workplace. The following are some ways to involve workers: (1) ES&H committees, (2) safety observers, (3) ad hoc health and safety problem-solving groups, (4) ES&H training of other employees, (5) analysis of job hazards, and (6) committees that plan and conduct ES&H awareness programs.
- 1.16 In accordance with 10 CFR 851.20(a)(6) and 10 CFR 851.20(b)(7), SUBCONTRACTOR shall establish procedures for workers to report without reprisal, job-related fatalities, injuries, illnesses, incidents and hazards and make recommendations about appropriate ways to control hazards. SUBCONTRACTOR must provide prompt response to such reports and recommendations in accordance with 10 CFR 851.20 (a)(7).
- 1.17 In accordance with 10 CFR 851.20(b)(8), SUBCONTRACTOR's workers shall have the right, without reprisal, to decline to perform an assigned task because of a reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to the worker coupled with a reasonable belief that there is insufficient time to seek effective redress through normal hazard reporting and abatement procedures.
- 1.18 In accordance with 10 CFR 851.20(a) and 851.20(a)(3), SUBCONTRACTOR shall assign worker safety and health responsibilities to line management and supervision, evaluate personnel performance, and hold both management and workers accountable for worker safety and health performance. SUBCONTRACTOR shall hold its line management personnel accountable for the safety and health of SUBCONTRACTOR's workforce and for successfully performing the safety and health requirements of the subcontract and shall, at least annually, evaluate the effectiveness of its line management personnel's performance in meeting this objective. If SUBCONTRACTOR, or any lower-tier subcontractor, independently either suspends or terminates an employee for unsafe acts resulting from performance of work under this subcontract, SUBCONTRACTOR shall immediately provide written notification to the STR with information on that action.
- 1.19 Where this Exhibit states that safety or accident prevention sign, label, or tag is required the SUBCONTRACTOR shall be required to use signs, labels, or tags identical to those used by the CONTRACTOR unless otherwise authorized by the CONTRACTOR's STR.

F2.0 Subcontractor's Site-Specific ES&H Plan

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- 2.1 To perform subcontract work at LANL, SUBCONTRACTOR is required to comply with CONTRACTOR's 10 CFR 851 Worker Safety and Health Program, the requirements of which are set forth in this Exhibit. This Exhibit also contains additional safety, health and environment requirements that CONTRACTOR considers necessary for performance of work at LANL. Further, SUBCONTRACTOR shall supplement the requirements of this Exhibit with such additional safety, health and environment elements, if any, as SUBCONTRACTOR considers necessary to protect the safety and health of the workers and the environment, and so certify to CONTRACTOR that this Exhibit together with any additional elements constitute the SUBCONTRACTOR's Site-Specific ES&H Plan. The SUBCONTRACTOR will address in this Plan how it will comply with the specific requirements of clauses contained in this Exhibit during execution of work. Submission of a general safety manual or company ES&H policy unto itself is not adequate to constitute a Site-Specific ES&H Plan. SUBCONTRACTOR shall consolidate such ES&H plan elements and submit the complete SUBCONTRACTOR's Site-Specific ES&H Plan to CONTRACTOR for review and approval. SUBCONTRACTOR's Site-Specific ES&H Plan must be approved prior to issuance of a Notice to Proceed.
- 2.2 SUBCONTRACTOR is responsible for compliance with the ES&H requirements applicable to this subcontract regardless of the performer of the work. SUBCONTRACTOR's Site-Specific ES&H Plan shall specify how safety requirements will flow down to employees and sub-tier subcontractors. In accordance with 10 CFR 851.20(a)(5) and 10 CFR 851.20(b)(2)(ii), SUBCONTRACTOR will ensure that workers have access to SUBCONTRACTOR's Site-Specific ES&H Plan, and in accordance with 10 CFR 851.20(b) that workers comply with the requirements in the plan, respectively.
- 2.3 SUBCONTRACTOR's Site-Specific ES&H plan shall describe how the SUBCONTRACTOR complies with compliance orders, if any, issued by the Secretary of DOE in accordance with 10 CFR 851.4.
- 2.4 SUBCONTRACTOR's Site-Specific ES&H Plan shall include copies of any documents as specified in the following sections of this exhibit. Where the scope of work and this Exhibit specify Hazardous Waste Operations or Emergency Response as defined in 29 CFR 1910.120 or 29 CFR 1926.65 the SUBCONTRACTOR's Site Specific ES&H Plan shall contain the safety and health program elements stated in 29 CFR 1910.120(b) and Site Specific Safety and Health Plan as required by 29 CFR 1910.120 (b)(4)(i) through 1910.120(b)(4)(iv).
- 2.5 Changes to SUBCONTRACTOR's Site-Specific ES&H Plan require re-submittal to and approval by CONTRACTOR.

F3.0 Subcontractor and Lower-Tier Subcontractor Minimum Performance Eligibility Factors

- 3.1 The SUBCONTRACTOR should have a demonstrated safety performance equal to or lower than the standards contained in Attachment F3-1, Safety Performance Eligibility Requirements, and shall complete Attachment F3-2, Environment, Safety and Health History Worksheet. If any of the maximum allowable averages in Attachment F3-1 is exceeded, the SUBCONTRACTOR shall provide information to the CONTRACTOR that clearly explains the excessive rate and that the anomaly causing that excess was not easily preventable using sound safety practice. CONTRACTOR must approve any exceedances.
- 3.2 If SUBCONTRACTOR intends to use lower-tier subcontractors to perform elements of the

subcontracted Scope of Work, such lower-tier subcontractors shall have a demonstrated safety performance equal to or lower than the standards contained in Attachment F3-1, Safety Performance Eligibility Requirements, and shall complete Attachment F3-2, Environment, Safety and Health History Worksheet. SUBCONTRACTOR must obtain approval from CONTRACTOR for any sub-tier SUBCONTRACTOR that exceeds one or more of the maximum allowable averages in Attachment F3-1.

- 3.3 SUBCONTRACTOR shall ensure that lower-tier subcontractors that perform elements of the subcontracted Scope of Work adhere to this Exhibit F and SUBCONTRACTOR'S Site-Specific ES&H Plan. SUBCONTRACTOR is responsible for ensuring that its lower-tier subcontractor's activities are included in SUBCONTRACTOR'S Site-Specific ES&H Plan and that they work within the requirements of this Subcontract. The names and performance eligibility information of all the entities performing work at every tier must be provided to CONTRACTOR prior to commencement of work (see Attachment F3-1, Safety Performance Eligibility Requirements).
- 3.4 If new or additional lower-tier subcontractors are proposed to be used by SUBCONTRACTOR at any time after the award of the subcontract, SUBCONTRACTOR must notify CONTRACTOR at least 15 calendar days before the proposed start date of the new lower-tier subcontractor and submit eligibility information as provided in paragraph 3.1 above.

F4.0 Subcontractor ES&H Representative Duties and Responsibilities

SUBCONTRACTOR shall provide a competent person(s) and/or qualified person(s) as required in several sections of the OSHA regulations such as, Scaffolds, Excavations, Steel Erection, etc. onsite as long as tasks requiring competent / qualified person(s) are being conducted.

A competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

A qualified person means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

SUBCONTRACTOR shall submit the competent person and/or the qualified person's qualifications to the CONTRACTOR and must receive approval prior to Notice to Proceed. Approval is based on the complexity of work, related hazards and the relevant skill sets (qualifications) required to address those hazards. For example, when toxic chemicals are used by workers and a potential for exposure exists the ES&H representative must be qualified to evaluate the exposure, select appropriate controls (PPE, Ventilation, etc.) and ensure compliance with any medical surveillance protocols. Note: The selection of Options are based on STR and ES&H SME professional judgement. The selection of Option A does not preclude the selection of Option D (Environmental Professional) when there are environmental risk associated with the project.

OPTION C

- 4.6 SUBCONTRACTOR shall designate an on-site ES&H Representative for all tasks conducted under this subcontract. This person shall assist SUBCONTRACTOR's supervision with implementation of SUBCONTRACTOR's approved Site-Specific ES&H Plan and CONTRACTOR's site requirements. The ES&H Representative should have formal ES&H

training, such as the following (depending on the work to be performed):

- A minimum of thirty (30) hours formal ES&H training in OSHA standards or pre-approved equivalent having other ES&H-related training certificates and/or job experience appropriate to the work being performed.
- Formal environmental training and/or job experience in erosion control, waste management, or other environmental discipline.
- Current training in CPR and First Aid.

4.7 SUBCONTRACTOR shall submit the ES&H Representative's qualifications and receive approval from CONTRACTOR prior to issuance of a Notice to Proceed.

4.8 SUBCONTRACTOR's ES&H Representative's duties shall include, but are not limited to:

- Promote and assist in implementation of SUBCONTRACTOR's Site-Specific ES&H Plan, including review of integrated work documents.
- Cease work and take immediate actions, as necessary, to remove personnel from hazardous areas if the safety or health of SUBCONTRACTOR's personnel, other site personnel, or third parties is jeopardized by SUBCONTRACTOR's work activities, and notify CONTRACTOR's STR.
- Continuously evaluate the site for any hazards and environmental compliance issues not previously identified or adequately controlled, initiate measures required to protect personnel, the public and the environment, and revise documents accordingly.
- Participate in ES&H and pre-job briefings as required.
- Conduct and document ES&H inspections in accordance with the requirements of Subclause F9.1.

4.9 SUBCONTRACTOR's assigned ES&H Representative may have other duties as long as they will not interfere with or prevent the employee from performing the above stated responsibilities.

F5.0 Incident Reporting Requirements

5.1 In accordance with 10 CFR 851.26(b), SUBCONTRACTOR shall:

- Report and investigate accidents, injuries and illnesses; and
- Analyze related data for trends and lessons learned (reference DOE Order 225.1B, Accident Investigations, March 04, 2011).

5.2 SUBCONTRACTOR must immediately notify CONTRACTOR's STR verbally, and then in writing (within 24 hours), of any on-site event or condition that adversely affects, or may adversely affect CONTRACTOR, its mission, CONTRACTOR's or SUBCONTRACTOR's personnel, the public, property, or the environment. An on-site event or condition includes but is not limited to: employee injury/illness/first aid (including a significant change in severity of the original condition); fire; any accident, incident, or near-miss; property damage to equipment, facilities, or motor vehicles; non-compliance with safety, health or environmental requirements; non-permitted release to the environment; or any other unplanned event that may be a violation of a regulatory requirement or that may be viewed negatively by the public, CONTRACTOR, or GOVERNMENT.

5.3 In situations where any of the conditions mentioned above occur, the scene surrounding or

associated with the event shall be preserved for continued investigation unless such actions interfere with establishing a safe condition or CONTRACTOR concurrence is obtained. SUBCONTRACTOR and CONTRACTOR personnel may jointly investigate each injury/illness, accident, incident, near miss, or environmental noncompliance.

- 5.4 SUBCONTRACTOR shall provide a complete written accident/incident investigation report of any incident, outlining the causes, corrective actions, and measures taken to prevent recurrence of similar incidents, to CONTRACTOR's STR within two working days of its occurrence. Furthermore, the SUBCONTRACTOR shall cooperate and participate as required with any CONTRACTOR or GOVERNMENT fact finding, learning team, critique, analysis, or investigation for such events/conditions.

F6.0 Injury/Illness Recordkeeping and Reporting

- 6.1 SUBCONTRACTOR shall maintain accurate accident and injury/illness logs in accordance with 10 CFR 851.26 (a)(1). Logs shall be available for review by CONTRACTOR upon request. SUBCONTRACTOR must enter each recordable injury or illness on the SUBCONTRACTOR's OSHA 300 Log and 301 Incident Report within seven (7) calendar days of receiving information that a recordable injury or illness has occurred.
- 6.2 In accordance with 10 CFR 851.26(a)(2), the SUBCONTRACTOR is required to report all job-related injuries and illnesses, regardless of severity, immediately to CONTRACTOR's STR. Copies of the appropriate medical treatment forms (medical provider's diagnosis, restrictions, treatment plan) shall be made available to CONTRACTOR Occupational Medicine when requested (see Clause F15.0). SUBCONTRACTOR shall also provide an investigation report using Attachment DOE Form 5484.3 to the CONTRACTOR STR within 2 working days, which includes the location where the injury/illness occurred, date, time, name, Z-number, home address for employees with recordable injuries/lost or restricted work days, body part injured, nature of injury, medical treatment, root cause of accident and corrective actions, restrictions, number of days hospitalized, number of work days lost, number of restricted work days, and number of productive man-hours for the month. Prior to injured or ill employee returning to work, copies of the attending physician's report releasing the employee to full or limited duty shall also be submitted.
- 6.3 SUBCONTRACTOR shall maintain reports and documentation required by Federal, State, and Local regulations in accordance with 10 CFR 851.26(a) and (b). This includes all hazard inventory information, hazard assessments, exposure measurements and exposure controls. These reports and documentation shall be submitted to CONTRACTOR upon request. SUBCONTRACTOR shall not conceal nor destroy any information concerning non-compliance or potential noncompliance with the requirements of 10 CFR 851.26(a)(4).
- 6.4 In accordance with 10 CFR 851.26 (a)(2), the SUBCONTRACTOR shall submit a weekly productive man-hours report to the STR every Monday for the preceding week (when work is performed) using Attachment F6-1, Weekly Productive Man-Hour Report.

F7.0 Employee Training

- 7.1 In accordance with 10 CFR 851.25(a), (b) and (c), SUBCONTRACTOR shall ensure that workers are properly trained and qualified to safely perform all assigned tasks in accordance with the Subcontractor Training Requirements (Attachment F7-0).

This includes training of workers in the hazards to which they may be exposed so they can perform their duties in a safe and healthful manner. This must include initial, periodic, and additional training and provide information on each hazard before the time of initial assignment to a job involving exposure to each hazard. SUBCONTRACTOR must provide training and information to workers who have worker safety and health program responsibilities that is necessary for them to carry out those responsibilities.

- 7.2 Any CONTRACTOR-required and provided training is noted in the applicable sections of this Exhibit. CONTRACTOR will maintain records of any training provided to SUBCONTRACTOR and such records will be made available to SUBCONTRACTOR upon request.
- 7.3 SUBCONTRACTOR shall conduct or acquire training and maintain records of other specific training required to perform work safely. Training records shall be retained on site for the duration of the contract and made available to CONTRACTOR, upon request.
- 7.4 SUBCONTRACTOR workers shall complete any facility-specific training required and provided by the CONTRACTOR.
- 7.5 The training identified shall be completed prior to start of work associated with the respective training subject.

F8.0 ES&H Meetings/Pre-Job Briefings/Daily Briefings

- 8.1 In accordance with 10 CFR 851 20(a)(8), SUBCONTRACTOR shall provide for regular communication with workers about workplace safety and health matters.
- 8.2 Prior to commencement of work, all SUBCONTRACTOR personnel, either initially or as they are introduced to the site, shall attend a pre-job briefing / orientation. A pre-initiation of work briefing will be conducted by the CONTRACTOR. The SUBCONTRACTOR is responsible for any subsequent briefings of SUBCONTRACTOR employees and will be formally documented. This documentation must be available for review by CONTRACTOR upon request. The pre-initiation of work briefing shall cover the scope of the subcontract, the associated hazards and environmental requirements, and the steps that will be taken to mitigate those hazards and assure environmental compliance, as well as the roles and responsibilities of CONTRACTOR, SUBCONTRACTOR, and its employees, at a minimum.
- 8.3 Once each month, CONTRACTOR will conduct a SUBCONTRACTOR ES&H meeting to provide a forum to focus on current ES&H topics, recognize exceptional performance/ compliance as well as review recent incidents and issues. SUBCONTRACTOR will be required to have a representative attend this meeting.
- 8.4 As required by circumstances and at the discretion of the CONTRACTOR an incident review board (IRB) will be convened. Those involved in selected incidents will be required to present the events surrounding the incident to the IRB as well as what actions that have been put in place by the SUBCONTRACTOR to mitigate the incident and to prevent re-occurrence. SUBCONTRACTOR management will be required attendants at the IRB meeting.
- 8.5 SUBCONTRACTOR shall provide a daily briefing for its workers which specifically addresses the hazards and mitigating controls for work to be performed that day. This daily briefing or pre-task planning briefing shall be documented and made available to the CONTRACTOR on

request. Pre-task planning documentation shall be available at the work location and provided to the STR upon request. In addition, SUBCONTRACTOR will conduct and document employee ES&H meetings. Documentation shall include the topic of said meetings, attendees, questions posed by workers, hazards identified by workers, and responses to worker questions and worker identified hazards by SUBCONTRACTOR's ES&H Representative or Management.

F9.0 ES&H Inspections

- 9.1 SUBCONTRACTOR shall conduct and maintain records daily of initial, and other periodic inspections of the work areas to monitor compliance with ES&H requirements and provide a written report to the CONTRACTOR STR (see Attachment F9-1, Samples of Inspection Checklist for Subcontractors). CONTRACTOR will also perform periodic inspections including compliance monitoring/sampling of the work areas and provide a written report to the STR who will communicate issues to SUBCONTRACTOR.
- 9.2 SUBCONTRACTOR shall promptly initiate action to correct all identified hazards, deficiencies, or compliance issues that SUBCONTRACTOR is responsible for.
- 9.3 SUBCONTRACTOR shall report all identified hazards, deficiencies, or compliance issues not under the control of the SUBCONTRACTOR to the CONTRACTOR STR.
- 9.4 SUBCONTRACTOR shall take all necessary steps to ensure the protection of employees, the public, and the environment until the hazards, deficiencies, or compliance issues are corrected.
- 9.5 In accordance with 10 CFR 851.20(b)(6), SUBCONTRACTOR shall ensure that workers have the right without reprisal to request and receive results of investigations, inspections and accident investigations.
- 9.6 Regulatory agencies such as the New Mexico Environment Department (NMED) and the U.S. Environmental Protection Agency (EPA) will make unannounced visits to work areas and perform periodic environmental compliance inspections. The SUBCONTRACTOR shall notify the CONTRACTOR STR immediately if regulatory agency personnel schedule a visit or an inspection of the site, or arrive at the site unannounced.

F10.0 Housekeeping

- 10.1 Good housekeeping practices are an integral component to maintaining a safe and environmentally compliant work environment. SUBCONTRACTOR shall keep all work areas neat and orderly at all times by providing the necessary resources and by implementing the following housekeeping practices:
 - Keep tools and materials properly stored when not in use and remove all materials that are no longer needed.
 - Ensure trash, scrap materials, and waste are placed in appropriate containers. Locate containers strategically throughout the work area to promote use.
 - Keep floors clear of trip and slip hazards including hoses, welding leads, electric cords, liquids, and other obstacles. Keep cords, hoses, and leads clear of walkways, roadways, and other locations where possible exposure to damage exists.
 - Properly store and dispose of paint, solvents, oil soaked rags, and debris, etc., in approved containers in accordance with the appropriate waste management regulatory requirements.

- Ensure protruding nails, screws, staples, and other sharp objects are protected or removed and do not present a hazard.
- Provide and keep eating and sanitary facilities maintained in a clean and sanitary condition at all times, including adequate washing facilities with soap and disposable towels.
- Provide clean, potable drinking water for employees in a safe, hygienic manner at all worksites. Single use cups shall be provided in a sanitary dispenser. Cups shall be replenished as needed during the day and trash cans provided for their disposal. "Community" or common use cups shall not be used.

Unless specified elsewhere in the subcontract, SUBCONTRACTOR shall provide and maintain its own sanitary toilet facilities for its employees. The cleaning and maintenance of the facilities, and method and location of waste disposal, shall be acceptable to CONTRACTOR.

F11.0 Emergency Preparedness Requirements

- 11.1 SUBCONTRACTOR must comply with CONTRACTOR's site-specific emergency response requirements which are covered in the General Employee Training and the facility-specific training for the facilities and buildings in which they work. CONTRACTOR will communicate site-specific emergency response requirements to SUBCONTRACTOR's employees at the beginning of the work to be performed under this contract. Communication of requirements will be documented by CONTRACTOR.
- 11.2 Unless specified otherwise, communication of site-specific emergency response requirements to SUBCONTRACTOR employees who do not attend the initial communication briefing described in paragraph 11.1 above must be performed by SUBCONTRACTOR and formally documented. This documentation must be available for review by CONTRACTOR.
- 11.3 SUBCONTRACTOR is responsible for defining emergency procedures specific to the work scope relative to the site in the SUBCONTRACTOR's Site-Specific ES&H Plan. These emergency procedures must be written and communicated to the employees. At a minimum, SUBCONTRACTOR will include the following information:
- Protective actions
 - Shelter-in-place
 - Evacuation of personnel
 - Notifications
 - Emergency signals
 - Evacuation routes
 - Assembly areas
 - Personnel accountability

An annual evacuation drill is required with documented results available for the CONTRACTOR's review.

- 11.4 SUBCONTRACTOR is responsible for ensuring that all employees and personnel entering the site are informed of the emergency procedures for their location of work.

F12.0 Personal Protective Equipment

- 12.1 SUBCONTRACTOR shall provide, use, and maintain personal protective equipment (PPE) to

protect SUBCONTRACTOR personnel from hazards directly related to the work. See 29 CFR 1910.132(a) and NFPA 70E.

- 12.2 SUBCONTRACTOR shall perform a required workplace hazard identification and exposure assessment in nationally recognized and accepted methodologies and recommended practices, such as in American Industrial Hygiene Association (AIHA) Publication: The Occupational Environment: Its Evaluation, Control, and Management (2 volumes) and/or AIHA Publication: A Strategy for Assessing and Managing Occupational Exposures (latest editions) to determine the required controls, including PPE.
- 12.3 SUBCONTRACTOR shall provide training to each employee who is required to use PPE. Each such employee shall be trained to know at least the following: when PPE is necessary; what PPE is necessary; how to properly don, doff, adjust, and wear PPE; the limitations of the PPE; and the proper care, maintenance, useful life, and disposal of PPE.
- 12.4 SUBCONTRACTOR shall require employees to wear eye protection equipped with hard side shields (safety glasses) manufactured to a recognized standard (ANSI Z87) when required by the work being performed. This applies to prescription eyewear as well.
- 12.5 Welders shall wear welding hoods or a hardhat/welding hood combination manufactured to a recognized standard and safety glasses while welding.
- 12.6 SUBCONTRACTOR employees shall wear safety shoes or boots manufactured to a recognized standard (ANSI Z41.1 or ASTM F2413) for all construction or demolition site work and when required by the presence of foot hazards for other type work being performed (Examples: warehousing, materials handling, machining and forming, etc.).
- 12.7 SUBCONTRACTOR employees who handle chemicals or harmful substances shall be trained and shall wear appropriate PPE per the chemical manufacturer's recommendations or as determined by exposure assessment (see Clause F52.0).
- 12.8 Hardhats manufactured to a recognized standard shall be worn with the brim forward at all times when required by the work being performed.
- 12.9 Gloves shall be specified by the SUBCONTRACTOR in accordance with 29 CFR 1910.138(b), 1926.28, 1926.95 that are effective protection when used in specific tasks. Gloves worn for general hand protection or worn when required to protect personnel from cut, puncture or abrasion hazards shall meet a minimum ANSI/ISEA EN388 cut resistance 4, puncture resistance 2, abrasion resistance 3.
- 12.10 In accordance with 10 CFR 851 Appendix A (10) workers performing electrical lockout activities shall wear properly rated electrical protective gloves and Arc Flash PPE (if required by NFPA 70E) while verifying absence of energy. SUBCONTRACTOR employees performing diagnostics and testing work and/or work with energized equipment within the NFPA 70E defined Arc Flash boundary shall wear arc flash PPE conforming to the requirements of NFPA 70E. SUBCONTRACTOR workers performing such work within the Restricted Approach boundary as defined in NFPA 70E are required to wear voltage rated PPE.
- 12.11 SUBCONTRACTOR shall require all employees to wear long pants and a suitable shirt, with no less than 4-inch sleeves, as the minimum work clothing to be worn at the worksite.

- 12.12 SUBCONTRACTOR employees exposed to high noise levels shall wear appropriate hearing protection PPE to reduce the noise dose to less than 100% of the ACGIH TLV for the exposure period.
- 12.13 All SUBCONTRACTOR employees working on construction, demolition, highway or remediation sites shall wear high visibility, reflective, vests at all times when not in office trailers / buildings or working in shops containing rotating machinery (shop saws, drill presses, etc.). Vests shall comply with Manual of Uniform Traffic Control Devices (MUTCD) Section 6E-3 (High Visibility Clothing). Flagmen and Signalmen shall wear vests complying with 29 CFR 1926.201.

F15.0 Occupational Medicine (OM) Services

- 15.1 In accordance with 10 CFR 851 Appendix A, Section 8, SUBCONTRACTOR shall:
- Ensure workers are evaluated by a recognized occupational medical provider, when required, prior to the work being performed. Attachment F15-1 is provided as a guide to determine when medical evaluations is required.
 - Maintain a work history log for each worker who performs work on LANL property. The work history log must include records of the dates and times the individual was on site.
 - Provide access to work-related medical records, work history logs, surveillance and certification records and employee records as requested by the CONTRACTOR.
 - Collaborate with LANL staff to obtain information on workplace job conditions and issues related to worker's health.
 - Provide workers access to their personal records as required by DOE regulations.
 - Obtain a return to work evaluation from a recognized occupational medical provider after a work related injury or illness or an absence due to any injury or illness lasting 5 or more consecutive days. The SUBCONTRACTOR will provide a copy of the work release to the CONTRACTOR's STR.
- 15.2 CONTRACTOR's Occupational Health Office will provide initial treatment (when requested) of any non-emergency work-related injury or illness for SUBCONTRACTOR workers for events that occur on LANL property. The SUBCONTRACTOR supervisor shall accompany SUBCONTRACTOR workers to Occupational Medicine.
- 15.3 SUBCONTRACTOR shall maintain a workers' compensation program for its employees including administration and associated case management.
- 15.4 SUBCONTRACTOR shall ensure that all workers' general health, physical and psychological capacity to perform work are adequate for the work assigned.

F17.0 Tools and Equipment

- 17.1 SUBCONTRACTOR shall ensure that all tools provided for use in work are used in accordance with the manufacturers' recommendations, have required guards in place, and are maintained in good working order. Appropriate personal protective equipment as specified in a hazard assessment or manufacturer's instructions must be worn when using any tool (see Clause F12.0, Personal Protective Equipment).
- 17.2 SUBCONTRACTOR shall ensure that all equipment and tools, including hand tools, are

inspected, operated, and maintained by qualified personnel. Damaged or defective tools shall be tagged "Out of service" and removed from LANL property until repaired or replaced.

- 17.3 SUBCONTRACTOR shall ensure that power tools and equipment are inspected prior to use and are inspected quarterly, at a minimum, or more frequently if recommended by the manufacturer. Inspection documentation shall be maintained by the SUBCONTRACTOR and made available to CONTRACTOR, upon request.
- 17.4 Unless approved in writing by the CONTRACTOR, SUBCONTRACTOR shall not use job-made tools of any kind at the jobsite.
- 17.5 SUBCONTRACTOR shall follow 29 CFR 1926.302(e) if powder actuated tools will be used. Only properly trained and certified employees shall be permitted to use powder-actuated tools. Documentation of the training shall be made available to CONTRACTOR upon request and each employee using such tools shall carry qualification cards. The powder charges (cartridges) for powder-actuated tools shall be controlled. Each cartridge shall be accounted for and properly stored. No live or spent cartridges shall be left on the ground or disposed of in trashcans or other unauthorized container.
- 17.6 SUBCONTRACTOR shall ensure that work is performed only in areas and at times where adequate illumination exists. SUBCONTRACTOR shall provide all lighting required to safely perform work and must meet the minimum intensities listed in 29 CFR 1926.56 Table D-3. Artificial lighting equipment shall be manufactured to a recognized standard acceptable to CONTRACTOR.
- 17.7 SUBCONTRACTOR must ensure that tools are never hoisted, lowered, or carried by the power cord. All electric tools shall be grounded, except Underwriters Laboratory or other nationally recognized testing laboratory (NRTL) listed and labeled double-insulated tools. SUBCONTRACTOR shall ensure all tools are checked for electrical continuity after repairs are made. Extension cords shall be in good condition, free of cuts, splices, or damage exposing conductors. Damaged and/or unserviceable cords shall be rendered un-useable by cutting connectors off both ends and removing them from LANL property for disposal.
- 17.8 SUBCONTRACTOR shall use ground fault circuit interrupters (GFCI(s)) on all temporary electrical applications, including task lighting.
- 17.8.1 Temporary construction light stringers that provide general purpose area lighting shall not be installed on the load side of a GFCI and shall have no receptacles installed in its dedicated branch circuit. Temporary light stringers shall contain a grounding conductor.
- 17.9 SUBCONTRACTOR shall ensure that all grinding wheels, wire brushes, and flapper wheels are rated for the grinder or other driving tool on which they are used. Grinding wheels will be ring-tested before use.
- 17.10 SUBCONTRACTOR will ensure that excess flow valves are installed on air manifolds and compressors supplying air to greater than 1/2-inch ID hoses. Hoses shall be restrained at source, inline and tool fittings to prevent whipping.
- 17.11 SUBCONTRACTOR shall ensure that fuel powered tools are not used inside a building or excavation without adequate ventilation and air monitoring. All fuel powered tools must be shut

down prior to being refueled.

- 17.12 SUBCONTRACTOR shall ensure that all SUBCONTRACTOR-owned ventilated enclosures, confinement systems, and/or local exhaust ventilation systems are tested and certified prior to use and on a routine basis not less than one time per year. This applies to ventilation systems that are intended to minimize employee exposures and prevent occupational diseases caused by the inhalation of hazardous, toxic, or radioactive contaminants. High-efficiency particulate air (HEPA) filtration systems must be certified to verify filtration efficiency prior to initial use, annually thereafter and after any maintenance that disturbs the HEPA filter.
- 17.13 SUBCONTRACTOR shall ensure that portable or vehicle mounted electric generators have the neutral conductor properly bonded to the generator case and all general purpose single phase 15, 20, and 30 amp receptacles are GFCI protected. Generators over 5 kW must be grounded.
- 17.14 SUBCONTRACTOR shall ensure that all electric power tools utilizing 60 Hz ac power (whether 120 V, 240 V, 480 V, etc.) are listed by a Nationally Recognized Testing Laboratory (NRTL). Such NRTL listing also applies to any extension cords, re-locatable power taps, temporary lighting, or other electrical equipment utilizing or delivering 60 Hz ac power. Any such power tool or other electrical device that is not listed must be approved by the CONTRACTOR electrical Authority Having Jurisdiction (AHJ) prior to use. Any NRTL listed electrical power tool that is repaired must be inspected by an AHJ before reuse.
- 17.15 SUBCONTRACTOR shall ensure that all electric power tools and wiring utilizing frequency of current other than 60 Hz ac power (whether DC, 120 V, 240 V, 480 V, etc.) are listed by a Nationally Recognized Testing Laboratory (NRTL). Any such power tool or other electrical device that is not listed must be approved by the CONTRACTOR electrical Authority Having Jurisdiction (AHJ) prior to use. Subcontractor workers operating such equipment must have electrical safety training approved by the LANL AHJ or their designee.

F20.0 Work Management

- 20.1 In accordance with 10 CFR 851.22 (a) and (c), SUBCONTRACTOR must implement a hazard prevention and abatement process to ensure that all identified and potential hazards are prevented or abated in a timely manner. For hazards identified either in the facility design or during the development of procedures, controls must be incorporated in the appropriate facility design or procedure. For existing hazards identified in the workplace, SUBCONTRACTOR must prioritize and implement abatement actions according to the risk to workers, implement interim protective measures pending final abatement and protect workers from dangerous safety and health conditions. SUBCONTRACTOR shall address hazards when selecting or purchasing equipment, products, and services.
- 20.2 In accordance with 10 CFR 851.21(a)(6) and 10 CFR 851 Appendix A Section 1, SUBCONTRACTOR shall implement a work control process that includes the following items:
- Development of a consolidated set of clearly defined work tasks/steps linked to hazards and controls. Tasks/steps shall be identified in sufficient detail to ensure that all hazards can be identified. All hazards shall be identified and analyzed; and required controls shall be selected and documented using a CONTRACTOR specified Integrated Work Document (IWD) (see sample Attachment F20-1) The Contractor may specify the use of Attachment F20-1 or they may specify other approved LANL IWD Part 1 Form. On the

IWD work tasks/steps and the hazards and associated controls must be clearly stated such that they are easily understood by the worker. Work must be performed in strict accordance with the IWD (e.g., all controls must be implemented). IWDs for or containing electrical work shall be developed in accordance with *Guide for Electrical IWDs for LANL Subcontractors* that may be found at: <http://int.lanl.gov/safety/exhibit-f/assets/docs/subcontractors-guide-electrical-iwds.pdf>.

- Identifies a single SUBCONTRACTOR Person-In-Charge (PIC) with the responsibility, accountability, and authority to ensure the quality of the Integrated Work Document (IWD) and to manage and coordinate the work. The PIC shall complete all CONTRACTOR PIC required training which includes the General IWM Overview and PIC module computer based training courses.
- Obtains authorization through the STR from the Facility Operations Director (FOD) or his/her formally designated representative to perform the work within the FOD'S facility.
- Direct involvement, as necessary, of workers, supervisors, Subject-Matter Experts (SME(s), and the PIC in identifying tasks/steps and associated hazards and controls.
- A pre-job brief must be conducted by the PIC using IWD Validation and Release Form 2102A, Attachment F20-2, which must involve the actual workers and, as necessary, direct supervisors and SME(s).
- A field walk-down of the work activity to validate the tasks/steps, hazards, and controls that have been identified for implementation.
- Clearly identified roles and responsibilities, accountabilities, and authorities required for work management, review, and approval.
- Ensure all appropriate release to work authorizations/permits have been provided by CONTRACTOR and all required SMEs are present to execute the work safely when required.
- Explicit facilitation of the release of the work by the SUBCONTRACTOR PIC prior to startup.
- Continued confirmation of readiness periodically performed for conducting the work.
- Feedback/Post Job reviews shall be documented using Attachment F20-0 CONTRACTOR specified IWD Part 4, Form 2104, <http://irm.lanl.gov/forms/Shared/2104.pdf> for Feedback/Post Job reviews with the workers and Person in Charge (PIC) should include the following:
 - Identify inefficiencies, problems during the activity, coordination issues, conditions, near misses;
 - Develop recommendations for improvement;
 - Verify the activity is complete and make notifications in accordance with Operations Director (FOD) requirements and ensure that follow-through actions (e.g., clean-up, recycle, waste disposal, equipment removal, and secure storage) are completed.

- 20.3 IWD(s) will be developed by SUBCONTRACTOR, reviewed by the SUBCONTRACTOR'S and CONTRACTOR'S ES&H Representative, and approved by the SUBCONTRACTOR'S line manager. The completed IWD must be provided to the CONTRACTOR STR for review and concurrence prior to commencement of affected work and approval by the LANL ESO if electrical work is to be performed. SUBCONTRACTOR shall include CONTRACTOR'S Form 2101 (FOD Requirements and Approval for Entry and Area Hazards and Controls) with the IWD. If a completed and approved Form 2101 was not included with the contract, SUBCONTRACTOR must obtain a completed and approved Form 2101 from the appropriate FOD through the CONTRACTOR STR.

- 20.4 SUBCONTRACTOR shall conduct pre and post-job briefings to ensure workers are aware of foreseeable hazards and protective measures (controls) described in the IWD, and document employee attendance at such briefing. Upon completion of the pre-job briefing, workers shall indicate understanding and compliance with the requirements by signing the concurrence 2102A IWD Validation and Release Form (Attachment F20-2) associated with the briefing.
- 20.5 SUBCONTRACTOR shall have authorized Work Package(s), containing the written scope of work, SUBCONTRACTOR'S IWDs that describe hazards and controls, FOD Requirements and Approval for Entry and Area Hazards and Controls, and daily pre-job briefing documentation at the work site for CONTRACTOR review.
- 20.6 Reporting hazards not previously identified.
- 20.6.1 SUBCONTRACTOR shall communicate to its employees the importance of reporting hazards not previously identified or evaluated.
- 20.6.2 Upon identification of a hazard, if immediate corrective action is not possible or the hazard falls outside the project scope, SUBCONTRACTOR must notify affected workers, post appropriate warning signs, implement needed interim control measures, and notify the STR of the action taken. SUBCONTRACTOR must stop work in the affected area until appropriate protective measures are established.

F59.0 Safety and Environmental Performance Citation

- 59.1 A "Safety Citation", or SC (see Attachment F59-1, Safety and Environmental Performance Citation), may be issued to SUBCONTRACTOR by the CONTRACTOR's ES&H organization through the CONTRACTOR STR for any safety or environmental violations. A Safety Citation is warranted for, but not limited to repeated safety or environmental violations, failure to abate any unsafe conditions, serious/imminent danger safety concerns, failure to report injury/incidents in a timely manner, improper OSHA record keeping and any other violations at the discretion of the STR, the TRIAD Safety Representative, and/or the Procurement Specialist. SUBCONTRACTOR application for payments will be placed on hold if any SC has not been resolved by SUBCONTRACTOR. For every three (3) SC's issued to SUBCONTRACTOR, or at the discretion of the STR, SUBCONTRACTOR shall (at SUBCONTRACTOR's expense and in a timely manner) conduct a minimum of one-half (1/2) of a shift Safety Stand-Down with all employees, including lower tier subcontract employees engaged in work activities at the Site.

Note: *If the citation was issued because of a lower tier's failure to comply, the citation will be issued to the prime subcontractor but will be held against the lower tier for the stand-down purposes). This stand-down time will be dedicated to documented safety briefings and general housekeeping.*

- 59.2 The SUBCONTRACTOR shall promptly evaluate and resolve any noncompliance with applicable ES&H requirements. If the SUBCONTRACTOR fails to provide resolution or if, at any time, the SUBCONTRACTOR's acts or failure to act causes substantial harm or an imminent danger to the environment or health and safety of employees or the public, the CONTRACTOR may issue an order stopping work in whole or in part. Any Stop Work Order issued by the CONTRACTOR under this clause (or issued by the SUBCONTRACTOR to a lower-tier SUBCONTRACTOR) shall be without prejudice to any other legal or contractual rights of the CONTRACTOR. In the event that the CONTRACTOR issues a Stop Work Order,

an order authorizing the resumption of the work may be issued at the discretion of the CONTRACTOR. The SUBCONTRACTOR shall not be entitled to an extension of time or additional fee, costs, or damages by reason of, or in connection with, any work stoppage ordered in accordance with this clause.

- 59.3 Should the SUBCONTRACTOR's or SUBCONTRACTOR's lower-tier SUBCONTRACTOR(s) actions or inactions result in an accident, release, incident, event, fatality, injury, or personnel overexposure that leads to a regulatory citation, notice of violation (PNOV or NOV) to the CONTRACTOR and/or the GOVERNMENT or disability to the CONTRACTOR to execute the Laboratory's primary or supporting mission, SUBCONTRACTOR shall reimburse CONTRACTOR and/or the Government for the amount of any resultant fine and/or the cost of additional Work required as a result of the enforcement action in accordance with General Condition, GC-12, Fines and Penalties. In accordance with General Condition, GC-13, Contractor's Right to Offset or GC-40, Back-charges, CONTRACTOR will retain offsetting amounts sufficient to cover CONTRACTOR's costs including, but not limited to, the cost of investigation, response, repair, regulatory response, remediation, abatement, permitting, fines, penalties, and loss of CONTRACTOR's fee.

EXHIBIT "F"

ENVIRONMENTAL, SAFETY, AND HEALTH REQUIREMENTS

PART II: SAFETY, HEALTH, & RADIOLOGICAL CLAUSES

Note: References herein to 10 CFR 851 or subparts thereof refer to Title 10 of the Code of Federal Regulations, Part 851 Worker Safety and Health Program.

F14.0 Hearing Conservation Program

- 14.1 When noise associated with work under this subcontract is equal to or exceeds the ACGIH threshold limit value for noise, SUBCONTRACTOR shall have a written Hearing Conservation Program that meets the requirements of 29 CFR 1910.95 and 29 CFR 1926.52. The program shall include noise monitoring to identify employees for inclusion in a Hearing Conservation Program; administrative, engineering controls, and lastly appropriate hearing protection PPE; the procurement and use of low noise equipment when possible; posting of signs and warnings for areas found to require hearing protection; how SUBCONTRACTOR will perform audiometric testing to establish a baseline audiogram; and training on noise health effects and hearing protection devices used at the work location. The written program shall be submitted as part of the Site-Specific ES&H Plan.
- 14.2 SUBCONTRACTOR shall ensure employees who are part of a Hearing Conservation Program complete annual training as defined in 29 CFR 1910.95.
- 14.3 SUBCONTRACTOR shall provide equipment for sampling and monitoring noise levels. Subcontractor shall calibrated such equipment before and after use, document all measurements and provide such documentation to CONTRACTOR upon CONTRACTOR's request.

F25.0 Portable Ladders

- 25.1 SUBCONTRACTOR shall ensure that ladders are visually inspected before each use by the trained ladder user and at least once a year for damage and/or defects in accordance with 29 CFR 1926.1053(b)(15). SUBCONTRACTOR shall mark and remove defective equipment from service immediately in accordance with 29 CFR 1926.1053(b)(16). The annual inspection must be documented on a label adhered to the side rail of the ladder.
- 25.2 Manufactured ladders must be rated for industrial or heavy-duty work and used only as allowed by the manufacturer. Job made ladders shall be constructed to conform to 29 CFR 1926.1053.
- 25.3 Metal ladders shall not be used during electrical work activities including electrical welding or if there is any risk of contacting an energized electrical circuit. Portable ladders shall not be used if the ladder or worker will come within 10 ft. of an energized power line.
- 25.4 SUBCONTRACTOR shall ensure stepladders shall be open, leveled on all four feet and spreaders locked in place before use. Workers shall never use the rung of a stepladder above that indicated on the ladder for standing or working. All four feet of a stepladder shall be secure and stable before the ladder is used. SUBCONTRACTOR is prohibited from ever using a stepladder more than 20 ft. tall. Combination type ladders (shelf / step) shall be used only in a

step ladder configuration.

- 25.5 SUBCONTRACTOR shall ensure the base of straight or extension ladders must be equipped with non-skid safety feet and shall be positioned out one fourth of the ladder's length from its upper point of support. The top shall extend at least three (3) feet beyond the supporting object or a grab rail must be provided. On extension ladders, SUBCONTRACTOR shall ensure safety dogs or latches are engaged, the extension rope is secured to a rung on the base section, and a minimum of three (3) rungs of overlap exist. For ladders being used for longer than single-use, one-time access, SUBCONTRACTOR shall always tie off, secure, or permanently fasten the ladder to the structure. Ladders fitting this category shall be held in place by a second person when being tied or untied. SUBCONTRACTOR shall not use an extension or single-section ladder more than 30 ft. long.
- 25.6 SUBCONTRACTOR shall ensure Ladders placed in any location where they can be displaced by work activities or traffic, such as passageways, doorways, or driveways, must be secured to prevent accidental displacement, or a barricade shall be used to keep the activity or traffic away from the ladder.
- 25.7 SUBCONTRACTOR shall ensure only one person at a time is permitted to work from a ladder unless a two-man designed ladder is in use.
- 25.8 SUBCONTRACTOR shall ensure tools, materials, or other items will not be carried while ascending or descending a ladder and hand lines must be used to raise and lower items to and from the work area.
- 25.9 SUBCONTRACTOR shall ensure workers keep both feet in contact with the rungs at all times while working and that ladders must be positioned to maintain proper access to work area so that the worker faces the ladder and the worker's body does not over-extend to the side during work operations.
- 25.10 SUBCONTRACTOR shall ensure fixed ladders are not used in lieu of scaffolds as a primary means of conducting work SUBCONTRACTOR shall only use fixed ladders for access/egress and/or to conduct low-level (4 feet or lower for general industry; 6 feet or lower for construction). Any fixed ladder work exceeding 4 feet (general industry) or 6 feet (construction) that does not maintain a constant 3 point contact requires standard fall protection.
- Note: This requirement does not pertain to the use of portable ladders, although consideration for the use of aerial lifts, scaffolding, platforms etc. shall be given for work that will require significant time or at heights over 6 feet.*
- 25.11 SUBCONTRACTOR shall ensure workers never use a portable ladder on a powered working platform, man-lift, scissor-lift, or other movable surface.
- 25.12 SUBCONTRACTOR shall provide training on the care, use and inspection of portable ladders to employees. Training records will be made available to CONTRACTOR upon request.

F26.0 Barricades

- 26.1 SUBCONTRACTOR is responsible for properly erecting and maintaining barricades in such a manner that they provide adequate warning/protection and do not impede the work of other

workers. Any exception must be approved in writing by the CONTRACTOR STR.

- 26.2 SUBCONTRACTOR shall provide and use one of the following barricade devices appropriate for the nature of the job for all physical hazard areas, including all construction areas:
- Warning barricades call attention to hazards but offer no physical protection. Yellow and black rope or tape shall be used for Warning barricades.
 - Protective barricades (hard barricade) warn as well as provide physical protection from falling (see Clause F23.0, Fall Prevention/Protection). Protective barricades must meet the requirements of 29 CFR 1926.203 and /or 29 CFR 1926.502(b) depending on application.
- 26.3 A protective barricade shall be erected when a warning barricade will not offer adequate protection.
- 26.4 An appropriate barricade shall be erected with a "Warning-No Entry without Permission" or similar tag before work is started. The requirements for access shall be stated on the tag together with identified hazards.
- 26.5 No barricade shall be placed closer than three feet from the edge of the danger point. A rope or tape shall be hung 42 inches plus or minus 3 inches above the floor or ground level.
- 26.6 Tags shall be placed at intervals of up to 30 feet around the entire barricade with at least one tag visible from each approachable side. Where the size of the jobsite prevents such placement, one tag shall be placed on the most common approachable side so long as it is clearly visible from any approachable side.
- 26.7 Barricades must have a designated entrance(s). Entry or exit from an area shall only occur through the designated entrance(s). Stepping over or ducking under the barricade is prohibited.
- 26.8 When an elevation difference of four feet or more is within three feet of the barricade, a protective barricade or a warning barricade at least six feet from the hazard edge must be used to allow an ample buffer area around the hazard.
- 26.9 Authorization to enter a barricade may only be obtained from the PIC working inside the barricade. In the alternative, personnel that are authorized to permit entry may be listed on the tag attached to the barricade.
- 26.10 When a work area can be completely isolated from all other activities and operations, the area may be designated as such and posted with the appropriate warning and access authorization signs in lieu of extensive barricades and tags. In this case, signs shall be visibly posted at all potential access points. Barricades must still be utilized within the posted area, as appropriate, to provide hazard control of individual tasks within the work area.
- 26.11 Barricades must be promptly removed when no longer required.

F27.0 Floor and Wall Openings

- 27.1 Holes or openings in floors, decking, or roofs, including skylights, through which personnel could fall, must be guarded with guardrails or with covers capable of supporting, without failure,

at least twice the maximum load expected to cross over the cover. When installed, covers must be secured to prevent displacement. When covers are removed, the exposed holes or openings must be constantly attended or protected by temporary standard railing.

- 27.2 Covers must be a distinctive bright and contrasting color to readily reveal their presence to workers and must have a sign posted that reads "WARNING – TEMPORARY COVER – DO NOT REMOVE UNLESS AUTHORIZED."
- 27.3 Material or equipment may not be stored on a hole/opening cover.
- 27.4 Wall openings from which there is a drop of more than four (4) feet and the bottom of the opening is less than three (3) feet above the working surface must be barricaded (see Clause F26.0, Barricades) or provided with standard guardrails. Guardrails shall be constructed with the top rail 42 inches (plus or minus 3 inches) from the floor or platform level and shall have a mid-rail and toe-board and withstand a side load of 200 lb. Toe-boards shall extend four (4) inches above the floor or platform level. SUBCONTRACTOR shall install vertical support posts for guardrails at intervals of not more than eight (8) feet.
- 27.5 Any floor opening/wall opening adjacent to hazardous operations/locations or machinery must be guarded against falls or unwanted access.

EXHIBIT "F"

ENVIRONMENTAL, SAFETY, AND HEALTH REQUIREMENTS

PART III: ENVIRONMENTAL & WASTE MANAGEMENT CLAUSES

Note: References herein to 10 CFR 851 or subparts thereof refer to Title 10 of the Code of Federal Regulations, Part 851 Worker Safety and Health Program.

F38.0 Pollution Prevention / Waste Minimization

- 38.1 SUBCONTRACTOR shall manage all work activities in a manner that prevents pollution, minimizes the generation of waste, and promotes energy conservation.
- 38.2 SUBCONTRACTOR shall practice pollution prevention and waste minimization techniques including proper storage of chemicals to assure compatibility in storage, prevent spills, separation of waste streams to expedite material management, prevents cross contamination, promptly clean-up and reporting of spills, and use of nonhazardous substitutes in the place of hazardous chemicals.
- 38.4 SUBCONTRACTOR shall purchase and use materials and products that provide for pollution prevention, and shall take advantage of reuse and recycling programs to the extent practical. Requirements for purchase of materials and products that provide for pollution prevention and requirements for waste minimization are as follows:
- 38.4.1 Recycled Construction Products and Materials – *Resource Conservation and Recovery Act* supplemented by Executive Order 13693 requires designated products to be purchased with the highest recovered (recycled) material content level practicable; *Comprehensive Procurement Guidelines* for products designated by the U.S. Environmental Protection Agency for purchase with recovered materials may be found at <http://www2.epa.gov/greenerproducts>; *Green Spec* directory of environmentally preferable construction products and materials organized by the CSI Master Format may be found at <http://www.greenspec.com>.
- 38.4.2 Biobased Materials and Products - *The Farm Security and Rural Investment Act* and Executive Order 13693 require preferential purchase of products certified by the U.S. Department of Agriculture to contain biobased content. Biobased Industrial Products certified by the U.S. Department of Agriculture may be found at <http://www.biopreferred.gov/BioPreferred/>.
- 38.4.3 Energy Efficient Products – Executive Order 13693 and 48 CFR Part 23.203 require the purchase of energy efficient products labeled "Energy Star". For energy efficient products, go to <http://www.eere.energy.gov>; *Building for Environmental and Economic Sustainability (BEES)* tool to weight the environmental and economic performance of building products and materials may be found at <http://www.bfrl.nist.gov/oe/bees.html>.
- 38.4.4 Waste Reduction and Recycling – Executive Order 13693 and DOE directives require waste reduction and recycling targets. For more information, visit <https://>

www.fedcenter.gov/programs/eo13693/.

F42.0 Spill Prevention, Reporting, and Response

- 42.1 SUBCONTRACTOR shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan in accordance with 40 CFR 112 (SPCC Plan) for facilities that have an aggregate aboveground storage capacity of 1,320 gallons, or greater, of oil or other petroleum products. The SPCC Plan shall be submitted by the SUBCONTRACTOR as part of its Site-Specific ES&H Plan.
- 42.2 SUBCONTRACTOR shall develop and maintain spill prevention control and countermeasures for chemicals, petroleum, and waste products used and stored on the work site. The following Best Management Practices (BMP(s)) shall be used for such spill prevention and countermeasures:
- Establish secondary containment, diversionary structures, or equipment to prevent the products from contaminating the environment should a spill or leak occur.
 - Locate storage facilities away from low-lying areas such as ditches, streams, and storm sewers.
 - Maintain nearby spill control equipment (i.e. spill kit).
 - Effectively containerize and label all products.
 - Aboveground fuel storage tanks designed for stationary use may not be used as mobile tanks.
- 42.3 Prior to the start of work the SUBCONTRACTOR shall supply CONTRACTOR STR with an inventory of chemicals, petroleum, and other products to be brought to any LANL property / facility and those to be stored at the worksite or elsewhere on LANL property. SUBCONTRACTOR shall describe the steps that will be taken to prevent releases of those products prior to bringing them onto the worksite as part of the submittal requesting authorization to transport chemicals, petroleum, or chemicals.
- 42.4 SUBCONTRACTOR shall provide immediate notification to the STR and LANL Emergency Management (EM) of any spilling, leaking, pumping, pouring, discharging (including wastewater), emitting or dumping of materials to the environment, regardless of quantity. CONTRACTOR STR will make appropriate on-site notifications to Environmental Compliance. Releases that are reportable to the NMED and EPA may require additional documentation. CONTRACTOR STR will supply necessary forms to document spills. SUBCONTRACTOR shall report any other incident relative to material/waste handling, storage, transportation, or disposal and shall take immediate and appropriate steps to protect human health and the environment. SUBCONTRACTOR agrees to sample and analyze liquid releases and/or spill residues as may be required for characterization and disposal, and to manage all waste generated in accordance with regulatory requirements.
- 42.5 SUBCONTRACTOR shall not store or use Clean Air Act Section 112r toxic or flammable chemicals in excess of the threshold quantities that would require LANL to have a Risk Management Plan. In accordance with Clause 42.3 SUBCONTRACTOR shall provide a list of all chemicals planned to be stored or used over the duration of the project. SUBCONTRACTOR shall indicate in the submittal of all chemicals those that will be stored or used in quantities in

excess of 500 pound.

F48.0 Reserved for EPC Use

F62.0 Attachments

Attachment F1-0	Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls, Non-Tenant Activity Form 2101 http://irm.lanl.gov/forms/Shared/2101.pdf
Attachment F3-1	Safety Performance Eligibility Requirements http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F3-1.pdf
Attachment F3-2	Environment, Safety and Health Worksheet http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F3-2.pdf
Attachment F6-1	Weekly Productive Man-Hour Report http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F6-1.pdf <i>DOE Individual Accident/Incident Report, F-5484</i> http://int.lanl.gov/safety/exhibit-f/downloads/DOE-Form-5484.pdf <i>Form 5484 Addendum:</i> http://int.lanl.gov/safety/exhibit-f/downloads/DOE-Form-5484-Addendum.pdf
Attachment F7-1	Access Training Matrix http://pmd-shpt-prod:6129/DocumentLibrary/MSS/forms/APMSM-001-004.pdf
Attachment F9-1	Samples of Inspection Checklists for Subcontractors http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F9-1.pdf
Attachment F10-1	Safety/Housekeeping Inspection Checklist http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F10-1.pdf
Attachment F15-1	Medical Surveillance for Toxic & Hazardous Substance Requirements http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F15-1.pdf
Attachment F20-0	Integrated Work Document (IWD) Part 4, Post Job Review, Form 2104 http://irm.lanl.gov/forms/Shared/2104.pdf
Attachment F20-1	Integrated Work Document (IWD) Subcontract Activity Specific Information, Form 2100A http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F20-1.pdf
Attachment F20-2	Integrated Work Document (IWD) Validation and Release, Form 2102A http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F20-2.pdf
Attachment F31-1	Penetration Permit, Form 2074 http://irm.lanl.gov/forms/Shared/2074.pdf
Attachment F42-1	Environmental Compliance Programs (EPC-CP) Non-Reportable Release Form http://int.lanl.gov/environment/water/flst/docs/forms/Unplanned-Release-Report.pdf
Attachment F59-1	Safety and Environmental Performance Citation http://int.lanl.gov/safety/exhibit-f/downloads/Attachment-F59-1.pdf

Integrated Work Document (IWD) Part 2, FOD Requirements and Approval for Entry and Area Hazards and Controls

Non-Tenant
Activity Form

IWD No./Work Request No: _____ Revision #: _____

The Facility Operation Director (FOD) must determine the facility entry and coordination requirements and identify the Environment, Safety, Health (ESH)/Security and Safeguards (S&S) hazards and controls associated with the specific activity location.

FOD	TA	Bldg.	Room	Other Location
FOD Designated Facility Point-of-Contact	Name	Phone	Pager	Email

Entry and Coordination Requirements (Check one or more of the following)

☐ No Entry/Coordination Requirements
☐ Plan of the Day/Plan of the Week (POTD/POTW)
☐ Security Clearance Requirements
☐ Co-located Hazards/Concerns
☐ Check out at End of Work
☐ Escort Required
☐ Other Bounding Conditions: _____

☐ FOD-designated facility Point-of-Contact must sign IWD Part 3
☐ Check in at Start of Work
☐ Work must be Scheduled
☐ Other Security Requirements (ex.: Cellphone, No Foreign Nationals, etc.)
☐ Quality Issues
☐ Check out Daily
☐ Review under Authorization Basis (AB)/Safety Basis/Unreviewed Safety Question (USQ)

Additional Comments

Instructions: In the block below, identify work-area hazards that could potentially affect the worker(s) or others. Avoid using the same Part 2, Form 2101 for multiple facilities. Ensure that work area hazards, specific to the facility or work location are identified and controlled. Specify the facility controls and preventive measures that must be implemented by the worker(s) to protect against the work area hazards, and also special training required.

ESH/S&S WORK AREA HAZARDS & CONTROLS			
Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures
<input type="checkbox"/> No Work Area Hazards Ionizing Radiation Work in posted radiological areas, work with radioactive materials, or work on or near radiation producing devices. Specify Hazard:	<input type="checkbox"/> Yes <input type="checkbox"/> No		Training and Qualification List training requirements (P300, Integrated Work Management, Section 6.1)

ESH/IS&S WORK AREA HAZARDS & CONTROLS

Work Area Hazards/Concerns Identify site hazards and concerns that could potentially affect the worker(s) or others.	Work Area Hazard Present <input type="checkbox"/> Yes <input type="checkbox"/> No	Facility Controls/ Preventive Measures/ Bounding Conditions Specify preventive measures, controls and bounding conditions for each site hazard	Reference Documents List permits, operating manuals, and other reference procedures	Training and Qualification List training requirements (P300, Integrated Work Management, Section 6.1)
Worker Exposure Working near non-ionizing radiation, beryllium, noise, chemicals, hazardous biological materials, lead, asbestos, temperature/humidity extremes, or high explosives. Specify Hazards:	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Energized and Operative Systems Working near energized electrical parts, pressure systems, steam lines; near unprotected belts, pulleys, chains or rotating equipment; fuel fired equipment other than vehicles; or spark or flame producing operations. Specify Hazards:	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Confined Spaces Entry into tanks, manholes, cooling towers, sumps, or any other area with potentially low oxygen concentration or other hazards such as toxic vapors or engulfment. Specify Hazards:	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Elevated Work Surface Elevated work when fall protection is not provided by conventional handrail systems or required per <u>P101-20, Fall Protection Program</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Environmental Impact Activities conducted in areas containing potential release site, contaminated soil, sensitive species, watercourse wetlands, floodplain, historical/archeological sites, or other work area condition that can be impacted by or can impact the environment. Specify Hazards:	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Security Requirements Specify:	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Other Hazards Specify:	<input type="checkbox"/> Yes <input type="checkbox"/> No			

I have verified that the hazards identified above adequately identify the area hazards and that the IWM process has been applied appropriately.

FOD or Representative (Signature/Z #/Date) Approval Required _____

Date Approval Expires: _____

ATTACHMENT F3-1
Safety Performance Eligibility Requirements

It is the CONTRACTOR policy that all work performed at LANL shall be conducted in a manner that protects workers, the public, and the environment. The objective of this policy is to establish a consistent site-wide approach to worker protection by incorporating safety and health into daily activities. To support the effective implementation of this policy, firms should have a demonstrated safety performance equal to or lower than the following standards:

Statistical Standards		
Experience Modification Rate	The "EMR" is a number that is assigned to your company based on the insurance premium you pay and your loss statistics. Contact your insurance company for these numbers.	Maximum Allowable Average: 1.00
Total Recordable Injury/Illness Case Rate (from Company OSHA 300 log)	Rate = $\frac{\text{Total Recordable Injuries/Illnesses} \times 200,000}{\text{Total Employee Hours Worked}}$	Maximum Allowable Average: 3.2
DART Case Rate (Days Away From Work, Restriction, or Job Transfer) (from Company OSHA 300 log)	Rate = $\frac{\text{Total Days Away/Restricted/Transferred Work Day Cases} \times 200,000}{\text{Total Employee Hours Worked}}$	Maximum Allowable Average: 1.4

Firms must submit a properly executed Environment, Safety, and Health (ES&H) History Worksheet (Attachment F3-2) along with a letter from their Workman's Compensation Insurance Carrier to certify the Experience Modification Rate (EMR) performance. If any of the above maximum allowable averages is exceeded, the firm shall provide information that clearly explains the circumstances leading to the excessive rate and demonstrating that the anomaly causing that excess was not easily preventable using sound safety practice.

If a firm is a joint venture, association, consortia, or partnership that has fewer than three years of demonstrated safety and/or environmental performance, each entity comprising the joint venture, association, consortia, or partnership must submit a properly executed Environment, Safety, and Health History Worksheet (Attachment F3-2) along with a letter from their Workman's Compensation Insurance Carrier to certify the EMR performance.

Any response received from a firm which does not provide the ES&H History Worksheet(s), which exceeds any of the stated maximum allowable averages, or which has fewer than three years of demonstrated safety and/or environmental performance may, at the CONTRACTOR'S sole discretion, be considered unacceptable. Those firms that are responsive with the ES&H History Worksheet(s) requirement that exceed the safety and environmental performance hurdle rates, may at the CONTRACTOR'S sole discretion, be required to submit a written Safety Improvement and Sustainability Plan acceptable to the CONTRACTOR'S accompanying the firm's Site-Specific ES&H Plan in accordance with Clause F2.0.

If a firm intends to use lower-tier subcontractors to perform elements of the subcontracted Scope of Work, such lower-tier subcontractors shall also meet the maximum allowable averages specified above. SUBCONTRACTOR shall be responsible for ensuring that all its lower-tier subcontractors meet the maximum allowable average safety performance eligibility requirements. When requested, Subcontractor must demonstrate to the CONTRACTOR'S satisfaction that its lower-tier subcontractors meet the maximum allowable average safety performance eligibility requirements. Any lower-tier subcontractor that does not meet one or more of the maximum allowable average safety performance eligibility requirements must be evaluated and approved by the Subcontractor and CONTRACTOR.

Attachment F3-2
Environment, Safety, and Health History Worksheet

Subcontractor Name: _____

Worksheet completed by: _____

Date: _____

Proposed Subcontract Number: _____

1. Experience Modification Rate (EMR)		
List your firm's Interstate EMR for the past three (3) years and total hours worked.		
Year:	EMR:	Hours Worked:
Year:	EMR:	Hours Worked:
Year:	EMR:	Hours Worked:
3-year average: 0		
If the state where the jobsite is located has an EMR rating system, provide the state EMR for the past three (3) years and the total hours worked.		
Year:	EMR:	Hours Worked:
Year:	EMR:	Hours Worked:
Year:	EMR:	Hours Worked:
3-year average: 0		
2. Total Recordable Case (TRC) and Days Away/Restricted/Transferred Case (DART) Rates		
List the cumulative injury statistics rates for the past three (3) years using the BLS formula to determine recordability.		
Year:	TRC:	DART:
Year:	TRC:	DART:
Year:	TRC:	DART:
3-year average TRC: 0 DART: 0		
Attach copies of the OSHA Annual Summary Logs (OSHA's Form 300A) for the three most recent years and a current year OSHA 300 Log for the months during the period since the last annual report.		
Any OSHA fine(s) over the past three (3) years? _____ If yes, provide a written explanation on an attachment to this form.		
3. Fatalities		
Any fatalities within the last three (3) years? _____ If Yes, list total number of fatalities: _____, and provide a written explanation for each fatality on an attachment to this form.		
4. Bureau of Alcohol, Tobacco, and Firearms violations		
Any Bureau of Alcohol, Tobacco, and Firearms violations within the last three (3) years? _____ If Yes, list the number: _____, and type of violations: _____.		

5.	For companies exempt from record keeping requirements per 29 CFR 1904.1 (ten or fewer employees), complete items 1 and 3 above and summarize the cause of the injuries/illnesses for the past three (3) years, including the current year, on a separate attachment to this form. Additionally, include corrective actions taken to prevent re-occurrence.	
6.	Check your type of work for the most recent 3 year period: <input type="checkbox"/> Non-Residential Building, include dates: <input type="checkbox"/> Heavy (Non-Highway) Construction, include dates: <input type="checkbox"/> Mechanical, include dates: <input type="checkbox"/> Electrical, include dates: <input type="checkbox"/> Other (State type and date):	
7.	List key Safety and Health personnel planned for this project. Please list name and expected position.	
	NAME	POSITION
8.	List key Environmental personnel planned for this project. Please list name and expected position.	
	NAME	POSITION
9.	Environmental Record	
	Has your firm been subject to any environmental enforcement proceedings before a federal or state agency within the last five (5) years? ____ If Yes, for each proceeding provide the name of the agency, the nature of the proceeding, the charge(s) and the result on an attachment to this form.	
	Has your firm violated or exceeded any federal or state environmental standard, requirement, regulation or statute within the last three (3) years? ____ If Yes, for each violation give a brief description of the nature of the violation on an attachment to this form.	

NOTE: This form is for evaluation purposes only and will not be a part of a Subcontract.

Attachment F6-1
Weekly Productive Man-Hour Report

Subcontract No.: _____ **Date:** _____

SUBCONTRACTOR: _____

Sub-Tier Subcontractors: _____

STR: _____

Note: Include all lower-tier subcontractors in reporting

Total Contract Productive Man-Hours for Week Ending _____		
	On-Site Hours	Off-Site Hours
Non-Manual		
Manual		
Total Hours		

1) OSHA 300 Log Report

Lost Workday Cases: _____

Restricted Cases or Job Transfer Cases: _____

Other Recordable Cases (i.e., medical treatment): _____

Total Recordable Cases: _____
(Cumulative for Project)

2) First Aids: _____

3) Incidents: _____

Definitions:

Non-Manual – Project Managers, Safety Representatives, Superintendents, Construction Managers, Engineers, Consultants, Drafters, Buyers, Cost Estimators, Schedulers, Clerks, etc.

Manual – Craft-type personnel (i.e., carpenters, welders, electricians, equipment operators, delivery personnel, etc.)

Incident – An unplanned event that may result in property damage, environmental release, vehicle damage or any undesired loss of resources.

Note: Only report productive man-hours. Do not include sick, vacation, etc.

******REPORT DUE TO STR BY NOON EVERY MONDAY******

NARRATIVE GUIDE

DO NOT INCLUDE THE NAME (OR OTHER PERSONAL IDENTIFIER) OF THE EMPLOYEE/OPERATOR OR WITNESS IN THIS SECTION. Use third person references, e.g., he slipped on the wet floor and broke his right toe.

35. Activity in progress at time of accident. Be specific. For example, if the employee was using tools or equipment or handling material, name them and tell what he was doing with them.

36. Events - Begin with initiating event and end with nature and extent of injury/damage. Name any objects or substances involved and tell how they were involved. Use a separate sheet for additional space.

Name and address of physician _____

If hospitalized, name and address of hospital _____

37. Accident Causes

a. Conditions

b. Actions

c. Factors influencing a or b.

38. Corrective Actions (if risk is acceptable, corrective action may not be necessary)

a. Actions taken

b. Actions recommended

c. To be completed by _____
Implementation Date

39. Accident Investigator _____ Date _____ Telephone _____
Official Position ☐ Supervisor ☐ Safety Professional ☐ Other _____

40. Supervisor responsible for Corrective Action _____ Date _____ Telephone _____

41. Accident Investigation Contact _____
(if different from line 39) _____ Telephone _____

5484 Addendum

Submit with Form 5484 to your STR or Requester

<input type="checkbox"/> Initial Report	<input type="checkbox"/> Update Report	Date of Original Report	
COMPANY NAME:			
Name of Employee:		Employee Z Number	Date of Injury
Incident Location:			
Nature of Injury:			
OSHA Classification			
<input type="checkbox"/> First Aid	<input type="checkbox"/> Recordable	<input type="checkbox"/> Restricted # Days	
<input type="checkbox"/> Lost-Time # Days	<input type="checkbox"/> For Information Only	<input type="checkbox"/> Undetermined	
Case is an Upgrade in Classification <input type="checkbox"/> Yes <input type="checkbox"/> No			
Home Address/Job Title of Employee Required if Case is Recordable, Restricted, or Lost-Time:			
Address:			
City:		State:	Zip Code:
Job Title:			
Reason for Determination/Treatment:			
Comments/Other information:			
Name of Individual Completing Report:		Title:	Date of Submission:

5484 Addendum

Submit with Form 5484 to your STR or Requester

INSTRUCTIONS:

- 1) First determine if the injury is work-related. If injury is work-related, complete this form along with Form 5484.
- 2) Indicate if this notification is an initial notification or an update to a previous notification. An update would be a change in medical condition or treatment of a previously reported injury. If this is an update, please indicate date of the previous notification.
- 3) Indicate company name, name of employee, Z number, and date of injury.
- 4) Indicate location of injury (i.e. TA-3, Building 1400, Room 200, sidewalk outside of TA-59, Building 3, etc.).
- 5) Briefly describe the nature of injury (i.e. Sprain to left knee, abrasion to right hand, etc.).
- 6) OSHA Classification:
 - a) Indicate if injury is **First Aid, Recordable, Restricted, Lost-Time** (according to OSHA classification), **For Information Only** (i.e. drug test, no treatment, etc.), or **Undetermined**. If **Restricted** or **Lost-Time**, please indicate the known number of days. If **Undetermined**, further investigation will be required after this initial notification.
 - b) Indicate if this notification is an upgrade to a previous OSHA classification. For example, if this is an update to a previous notification is the update indicating an upgrade from a lower OSHA classification (i.e. First Aid to Recordable, Recordable to Lost-Time, etc.).
 - c) If this is a recordable, restricted, or lost-day injury please enter the employee's home address and job title.
- 7) Briefly describe the reason for the OSHA classification determination or medical treatment. For example, "This is a recordable case because employee received prescription medication."
- 8) Describe any additional comments that might be relevant to this case.
- 9) Indicate the name of the individual completing this form, job title and date of submission.
- 10) Submit both Form 5484 and 5484 Addendum to your appropriate Subcontract Technical Representative (STR) or Requester.

Exhibit Section	Subcontractor Training/Certification Requirements	Evi
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Subcontractor Provided Training/Qualifications

F13.9	PPE Equipment & Training - Per 29 CFR 1910.132 (a) and NFPA 70E for PPE Training	OSHA 10 Hr,Tr
F13.1	Respiratory Protection – Per OSHA 1910.134 & ANSI Z88.2	Per Subs, E
F16.1	Powered Industrial Equipment	Trained b
F16.3.1	Forklift Training Personnel Inspection	Cetrification on
F17.5	Powder-actuated Tool Training - OSHA 29CFR1926.302	Qualific
F22.1	Welding, Cutting, Brazing, or Grinding and Fire Protection Training	Cert, Fire Exting Equipment train
F23.2	Supervisor/ User Fall Prevention Protection	Written Certi
F24.5	Scaffold Builder/ Inspector	Trained by q
F24.10	Scaffold User Training	Trained b
F25.1	Trained Ladder User	OSHA 10 Hr,Tr
F28.19	Excavation & Trenching Qualification	Trained by Co
F29.2	Confined Space-Air Quality Evaluation and Monitoring Training	Certification v
F32.2	Cranes and Material Handling Equi/Training and Physical Qualifications	Written Exan qualifi
F32.4	Cranes and Material Equipment/ Rigging Training	Skill Evaluatio
F32.18	Cranes and Material Handling Equi/Special Hoisting/Rigging Device Training	Skill Evaluatio
F34.1	Arial Work Platform Training	Trained by q
F35.3	Pressure Safety Training	Trained b
F36.3 F36.4	Electrical Safety Training and Qualifications	NFPA-70E class to exceed 3 year the requirements 110.2(B). 110.2 110.2(D0(3), cu (within 1 year), Training Dielect (see other requir LANL provide t
F50.3 F50.4	Radioactive Sealed Source/Radiation Generating Device Traing	Training and
F55.1	Heavy Metals Training and Qualifications	Training Qualifi Per ES&H Plan
U.2	EPA Certified Technician Qualifications (Regrigeration systems)	EPA Certi

Sexual Harassment Prevention (Self Study)

16534 .5 h

Exhibit Section	LANL - Security "Exhibit G" Provided Training/Certification Requirements Refer to LANL Training Site: https://extrain.lanl.gov	Course #	Length
G3.4.2	GET - if on site 10 days or longer	15503	8 h
G3.4.2	Annual Security Refresher - All L- and Q- cleared badge holders (available on-line)	1425	1 h
G3.4.2	Security Awareness - Comprehensive Briefing when Granting Q/L Clearance	8480	1 h
G3.4.2	Initial Information Security Briefing - For all computer users (available on-line)	9369	1 h
G3.4.2	Annual Information Security Refresher - For all computer users (available on-line)	47075	1 h
G3.4.2	Substance Abuse- Subcontractor compliance with LANL Policy (available on-line)	42095	.3 h
G3.4.2	Last Angry Words (Workplace Violence)	15869	.3 h
G3.4.2	LANL Emergency Procedure & Protective Actions	10922	.3 h
Exhibit Section	LANL- Provided Exh "F".	Course #	Length
F1.18	Beryllium General Employee Overview (Self Study) (available on-line if onsite 10 or more days in 12 month period)	55173	1 h
F12.3	Personal Protective Equipment Introduction Self-Study	28886	1 h
F20.2	PIC (Person In Charge) Training (self study computer based)	31881 31884 12454	1 h e con
F22.1	Welding, Cutting, Brazing, or Grinding Training - Must demonstrate welding Brazing skill by LANL Test Eng ST Chapter 13 GWS 1-09	43389 9519 test: ISD 341-2, GWS 1-05	2 h 3 h Vari indiv
F28.2	Excavation & Trenching Qualification - Excavation Self Study	31419	1 h
F29.3	Confined Space Training (May substitute with a Contractor-Approved training program/plan from the Subcontractor)	40439 40438	4 h 2 h
F30.4	Lock/Out Training Plan 127 (Also required to meet Electrical Safety Training requirements noted in section F30)	53493	4 h
F30.4	Electrical Safety for Working with Facility Power Electronics (This course addresses electrical hazard and control identification, work planning, risk assessment, and safe work practices for working with Variable Frequency Drives (VFDs).)	31693	3 h
F30.4	Battery Bank Safety - Covers drivers, technical background, national efforts, analysis, and work controls for high hazard battery bank work.	32034	1 h
F32.5	Cranes & Material Handling Equipment (Incidental) - Plan 122 (Required when using LANL Equipment)	20296 20295	4 h 10h
F32.5	Cranes & Material Handling Equipment (Qualified/Critical Lifts) - Plan 123 (Required when using LANL Equipment)	20297 20298	20 h 4 h
F36	Electrical Safety for Electrical Crafts - P101-13 Electrical Safety Program	31083	12 h
F36.3	Demonstrated Proficiency for the use of Dielectric PPE (Gloves) (or Subcontractor proof of training)	OJT19653 SS 30779	2 h
F36.3		OJT19645	.5 h

[illegible]

Attachment F9-1
Samples of Inspection Checklist for Subcontractors

Note: Subcontractor shall provide a written report to the Contractor STR

Project Title: _____

Subcontract No. _____

Subcontractor Name: _____ **Date:** _____

	Yes	No	N/A
First Aid			
1. Are first aid kit locations identified and accessible?	_____	_____	_____
2. Are emergency eye wash/safety showers available and inspected monthly?	_____	_____	_____
3. Are first aid kits inspected monthly?	_____	_____	_____
4. Is a qualified first aid/CPR provider on site?	_____	_____	_____
Personal Protective Equipment			
1. Have levels of personnel protection been established?	_____	_____	_____
2. Are respirators decontaminated, inspected, and stored according to standard procedures?	_____	_____	_____
3. Have employees been fit-tested?	_____	_____	_____
4. Is defected personal protective equipment tagged and taken out of service?	_____	_____	_____
5. Does compressed breathing air meet CGA Grade "D" minimum?	_____	_____	_____
6. Are there sufficient sizes and quantities of protective equipment?	_____	_____	_____
7. At a minimum, are employees utilizing safety glasses, hard hats, and steel toe boots?	_____	_____	_____
Fire Prevention			
1. Are employees smoking only in designated outdoor areas?	_____	_____	_____
2. Are fire lanes established and maintained?	_____	_____	_____
3. Are flammable liquid dispensing systems bonded?	_____	_____	_____
4. Are approved safety cans available for storage of flammable liquids?	_____	_____	_____
5. Are fire extinguishers available and inspected monthly?	_____	_____	_____
6. Are flammables and combustibles properly stored?	_____	_____	_____
7. Are flammable storage cabinets available and used when needed?	_____	_____	_____
Air Monitoring			
1. Is required air monitoring being conducted?	_____	_____	_____
2. Are air monitoring instruments calibrated daily?	_____	_____	_____
3. Are air monitoring logs up to date?	_____	_____	_____
4. Are instrument user manuals available?	_____	_____	_____
5. Are instruments being maintained?	_____	_____	_____
6. Are employees notified of personal sampling results within 5 days of receipt?	_____	_____	_____

Welding and Cutting

1. Are fire extinguishers present at welding and cutting operations with designated fire watch?
2. Are confined spaces evaluated prior to and during cutting and welding operations?
3. Have Hot Work Permits been completed?
4. Are proper helmets, goggles, aprons, and gloves available for welding and cutting operations?
5. Are welding machines properly grounded?
6. Are oxygen and fuel gas cylinders stored a minimum of 20 feet apart?
7. Are only trained personnel permitted to operate welding and cutting equipment?
8. Are gas cylinders transported in a secured vertical position with caps in place?

Yes No N/A

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Hand and Power Tools

1. Are defective hand and power tools tagged and taken out of service?
2. Is eye protection available and used when operating power tools?
3. Are guards and safety devices in place on power tools?
4. Are power tools inspected before each use?
5. Are non-sparking tools available when necessary?
6. Is the correct tool being used for the job?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Motor Vehicles

1. Are vehicles regularly inspected?
2. Are personnel licensed for the vehicles they operate?
3. Are unsafe vehicles tagged and reported to supervision?
4. Is vehicle safety equipment operating properly?
5. Are loads secured?
6. Are vehicle occupants using safety belts?
7. Are current insurance cards and blank accident report forms located in vehicles?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Emergency Plans

1. Are emergency telephone numbers posted?
2. Have emergency escape routes been designated?
3. Are employees familiar with the emergency signal?
4. Has the emergency route to the hospital been established and posted?
5. Is a vehicle on site that can transport injured employees to the hospital?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Materials Handling

1. Are materials stacked and stored to prevent sliding or collapsing?
2. Are tripping hazards identified?
3. Are semi-trailers chocked?
4. Are fixed jacks used under semi-trailers?
5. Are riders prohibited on materials handling equipment?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

	Yes	No	N/A
6. Are approved man lifts provided for the lifting of personnel?	_____	_____	_____
7. Are personnel in man lifts wearing approved fall protection devices?	_____	_____	_____

Fire Protection

1. Do employees know the location and use of all fire extinguishers?	_____	_____	_____
2. Are fire extinguisher locations posted?	_____	_____	_____
3. Are combustible materials segregated from open flames?	_____	_____	_____
4. Have fire extinguishers been professionally inspected during the last year?	_____	_____	_____
5. Are fire extinguishers visually inspected monthly?	_____	_____	_____

Electrical

1. Is electrical equipment and wiring properly guarded and maintained in good condition?	_____	_____	_____
2. Are extension cords kept out of wet areas?	_____	_____	_____
3. Is damaged electrical equipment tagged and taken out of service?	_____	_____	_____
4. Have underground electrical lines been identified by proper authorities?	_____	_____	_____
5. Has a lockout/tagout system been established?	_____	_____	_____
6. Are GFCIs being used on all temporary electrical systems and as needed?	_____	_____	_____
7. Are extension cords being inspected daily (i.e., group pin in place, no unapproved splices)?	_____	_____	_____
8. Are warning signs exhibited on high voltage equipment (250V or greater)?	_____	_____	_____
9. Is adequate distance maintained from overhead electrical lines?	_____	_____	_____
10. Are switches, circuit breakers, and switchboards installed in wet locations enclosed in weatherproof enclosures?	_____	_____	_____

Cranes and Rigging

1. Are cranes inspected daily prior to use?	_____	_____	_____
2. Are crane swing areas barricaded or demarked?	_____	_____	_____
3. Is all rigging equipment tagged with an identification number and rated capacity?	_____	_____	_____
4. Is rigging equipment inspection documented?	_____	_____	_____
5. Are slings, chains, and rigging inspected before each use?	_____	_____	_____
6. Are damaged slings, chains, and rigging tagged and taken out of service?	_____	_____	_____
7. Are slings padded or protected from sharp corners?	_____	_____	_____
8. Do employees keep clear of suspended loads?	_____	_____	_____
9. Are rated load capacities and special hazard warnings posted on crane?	_____	_____	_____
10. Are the records of annual crane inspection available?	_____	_____	_____
11. Has accessible areas within the swing radius of the rear of the crane been barricaded?	_____	_____	_____
12. Do crane operators have required training/certification?	_____	_____	_____

	Yes	No	N/A
Compressed Gas Cylinders			
1. Are breathing air cylinders charged only to prescribed pressures?	_____	_____	_____
2. Are cylinders stored in well ventilated areas?	_____	_____	_____
3. Is smoking prohibited in cylinder storage areas?	_____	_____	_____
4. Are cylinders stored secure and upright?	_____	_____	_____
5. Are cylinders protected from snow, rain, etc.?	_____	_____	_____
6. Are cylinders caps in place before cylinders are moved?	_____	_____	_____
7. Are propane cylinders stored and used only outside of buildings?	_____	_____	_____

Scaffolding

1. Is scaffolding placed on a flat, firm surface?	_____	_____	_____
2. Are scaffold planks free of mud, ice, grease, etc.?	_____	_____	_____
3. Is scaffolding inspected before each use?	_____	_____	_____
4. Are defective scaffold parts taken out of service?	_____	_____	_____
5. Have employees completed scaffold user training?	_____	_____	_____
6. On scaffolds where platforms are overlapped, is planking overlapped a minimum of 12 inches?	_____	_____	_____
7. Does scaffold planking extend over end supports between 6 to 18 inches (dependent upon platform length)?	_____	_____	_____
8. Are employees restricted from working on scaffolds during storms and high winds?	_____	_____	_____
9. Are all pins in place and wheels locked?	_____	_____	_____
10. Is required perimeter guarding (top rail, mid rail, and toe board) present?	_____	_____	_____
11. Has a competent person been designated to oversee scaffold construction?	_____	_____	_____
12. Are employees prohibited from moving mobile scaffold horizontally while employees are on them?	_____	_____	_____
13. Are all scaffolding components manufactured by the same company?	_____	_____	_____

Ladders

1. Are ladders regularly inspected?	_____	_____	_____
2. Are access ways, stairways, ramps, and ladders clean of ice, mud, snow, or debris?	_____	_____	_____
3. Are ladders being used in a safe manner?	_____	_____	_____
4. Are ladders kept out of passageways, doors, or driveways?	_____	_____	_____
5. Are broken or damaged ladders tagged and taken out of service?	_____	_____	_____
6. Are metal ladders prohibited in electrical service?	_____	_____	_____
7. Are stairways and floor openings guarded?	_____	_____	_____
8. Are safety feet installed on straight and extension ladders?	_____	_____	_____
9. Is general housekeeping being maintained?	_____	_____	_____
10. Are ladders tied off?	_____	_____	_____
11. Are handrails and side rails installed along the unprotected sides of stairways having 4 or more risers or rising more than 30 inches?	_____	_____	_____

Site Safety Plan

1. Is a site safety plan available on site and accessible to all employees?	_____	_____	_____
2. Does the safety plan accurately reflect site conditions and tasks?	_____	_____	_____
3. Have potential hazards been described to employees on site?	_____	_____	_____
4. Is there a designated safety official on site?	_____	_____	_____
5. Have all employees signed a safety plan acknowledgment form?	_____	_____	_____

	Yes	No	N/A
Site Posters			
1. Are the following posters displayed in a prominent and accessible area?	_____	_____	_____
A. Minimum Wage	_____	_____	_____
B. OSHA Job Protection	_____	_____	_____
C. Equal Employment Opportunity	_____	_____	_____
2. Are all required state specific posters displayed?	_____	_____	_____
Site Control			
1. Are work zones clearly marked?	_____	_____	_____
2. Are support trailers located to minimize exposure from a potential release?	_____	_____	_____
3. Are support trailers accessible for approach by emergency vehicles?	_____	_____	_____
4. Is the site properly secured during and after work hours?	_____	_____	_____
5. Is an exclusion zone sign-in/sign-out log maintained?	_____	_____	_____
6. Are only employees with current training and physicals permitted in exclusion zone?	_____	_____	_____
Heavy Equipment			
1. Is heavy equipment inspected as prescribed by the manufacturer?	_____	_____	_____
2. Is defective heavy equipment tagged and taken out of service?	_____	_____	_____
3. Are project roads and structures inspected for load capacities and proper clearances?	_____	_____	_____
4. Is heavy equipment shut down for fueling and maintenance?	_____	_____	_____
5. Are backup alarms installed and working on mobile equipment?	_____	_____	_____
6. Have qualified equipment operators been designated?	_____	_____	_____
7. Are riders prohibited on heavy equipment?	_____	_____	_____
8. Are guards and safety appliances in place and used?	_____	_____	_____
9. Are operators using the "three point" system when mounting/dismounting equipment?	_____	_____	_____
Excavation			
1. Has a "competent person" been designated to oversee excavation activities?	_____	_____	_____
2. Prior to opening excavations, are utilities located and marked?	_____	_____	_____
3. Has a professional engineer evaluated all excavations greater than 20' deep?	_____	_____	_____
4. Is there rescue equipment on site and accessible to the excavation area?	_____	_____	_____
5. Is excavated material placed a minimum of 24 inches from the excavation?	_____	_____	_____
6. Are the sides of excavation sloped or shored to prevent cave ins?	_____	_____	_____
7. Have excavations greater than 4 feet deep been monitored for hazardous atmospheres (i.e., LEL/O2 deficiency)?	_____	_____	_____
8. Are ladders or ramps used in excavations over 4 feet deep?	_____	_____	_____
9. Are means of egress available so as to require no more than 25 feet or lateral travel?	_____	_____	_____
10. Are barriers, i.e., guardrails or fences placed around excavations near pedestrian or vehicle thoroughfares?	_____	_____	_____
11. Is excavation inspected daily by competent persons and documented?	_____	_____	_____

Confined Spaces

Yes No N/A

1. Have employees been trained in the hazards of confined spaces?
2. Are confined space permits posted at entrance to confined space?
3. Is a copy of the confined space entry procedure available?
4. Has a rescue plan been established?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Attachment F10-1
Safety / Housekeeping Inspection Checklist**

Safety / Housekeeping Inspection Checklist					
Subcontract No. / Location		Supervisor (name)			Date
		Satisfactory	Unsatisfactory	Not Applicable	
Personal Protective Equipment					
Housekeeping					
Flammable and Combustible Liquids					
Welding and Cutting Operations					
Electrical Installations					
Floor and Wall Openings/Guarding					
Ladders					
Scaffolding					
Temporary Heaters					
Fire Protection and Prevention					
Material Storage and Handling					
Demolition Work					
Concrete Construction					
Steel Erection					
Masonry Work					
Excavation / Trench Shoring					
Cranes / Hoists and Derricks					
Power Tools					
Hand Tools					
Heavy Equipment					
Motor Vehicles					
Equipment Maintenance (Upkeep)					
Accident Prevention (Warning) Signs and Tags					
Barricades					
Compressed Air Equipment					
ALARA (Radcon)					
OVERALL RATING	Excellent	Above Average	Average	Below Average	Unsatisfactory
COMMENTS:					

Attachment F15-1: Medical Surveillance for Toxic and Hazardous Substance Requirements

*Note: All medical surveillances are held to regulations posted in clause F1: General Requirements

Potential Carcinogens:	CAS Number	Regulatory Driver
1,2-Dibromo-3-Chloropropane	96-12-8 67708-83-2	29 CFR 1910.1044
1,3-Butadiene	106-99-0	29 CFR 1910.1051
2-Acetylaminofluorine	53-96-3	29 CFR 1910.1014
3,3'-Dichlorobenzidine	91-94-1	29 CFR 1910.1007
4-Aminodiphenyl	92-67-1	29 CFR 1910.1011
4-Dimethylaminoazobenzene	60-11-7	29 CFR 1910.1015
4-Nitrobiphenyl	92-93-3	29 CFR 1910.1003
Acrylonitrile	107-13-1	29 CFR 1910.1045
Alpha-Naphthylamine	134-32-7	29 CFR 1910.1004
Benzene	71-43-2	29 CFR 1910.1028
Benzidine	92-87-5	29 CFR 1910.1010
Beta-Naphthylamine	91-59-8	29 CFR 1910.1009
Beta-Propiolactone	57-57-8	29 CFR 1910.1013
Bis-Chloromethyl ether	542-88-1	29 CFR 1910.1008
Chromium (VI)	1333-82-0 7738-94-5	29 CFR 1910.1026
Ethylene Oxide	75-21-8	29 CFR 1910.1047
Ethyleneimine	151-56-4	29 CFR 1910.1012
Formaldehyde	50-00-0	29 CFR 1910.1048
Methyl chloromethyl ether	107-30-2	29 CFR 1910.1006
Methylene chloride	75-09-2	29 CFR 1910.1052
Methylenedianiline	101-77-9	29 CFR 1910.1050
N-Nitrosodimethylamine	62-75-9	29 CFR 1910.1016
Vinyl Chloride	75-01-4	29 CFR 1910.1017

Metals:	CAS Number	Regulatory Driver
Arsenic-Inorganic	7440-38-2	29 CFR 1910.1018
Beryllium	7440-41-7	10 CFR 850
Cadmium	7440-43-9 1306-19-0	29 CFR 1910.1027
Lead	74-39-1	29 CFR 1910.1025 29 CFR 1926.62
Fibers:	CAS Number	Regulatory Driver
Asbestos	1332-21-4	29 CFR 1910.1001 29 CFR 1926.1101
Silica	14808-60-7	29 CFR 1910.1053 29 CFR 1926.1153
Physical and Biological Substances:		Regulatory Driver
Human and Blood-Borne Pathogens		29 CFR 1910.1030
Noise		29 CFR 1910.95 DOD Instruction 6055.12 DOD Hearing Conservation Program
Occupational Groups:		Regulatory Driver
Hazardous Waste/Emergency Response		29 CFR 1910.120
Respiratory Protection		29 CFR 1910.134
Laser User		ANSI Z136.1-2014
Deployable Teams (ARG, BEST, JTOT, RAP)		DOE Order 151.1-4 Comprehensive Emergency Management System Centers for Disease Control, Health Information for International Travel

Required Certification:		Regulatory Driver
DOT Truck Driver US DOT Federal Highway Admin, Federal Motor Carrier Safety		49 CFR 391.41
Tower Climber (Hoisting & Rigging)		TSCM Operations Manual DOE O 471.2-4, 02-06-04 Chapter 3, Par III E
Crane Operator (Hoisting & Rigging)		Mobile or Pulpit Crane operator licensed by the State of New Mexico. Licensing and training requirements conform to 29 CFR 1926.1427 Subpart CC

**Integrated Work Document (IWD) Part 4,
Feedback/Post Job Reviews**

IWD #: _____ Revision #: _____

Feedback of ongoing activities/post job review with the workers and Person in Charge (PIC) should include the following:

- identify inefficiencies, problems during the activity, coordination issues, unanticipated conditions, near misses; and
- develop recommendations for improvement.

A post-job review with the workers and PIC should include the following:

- verify that the activity is complete and make notifications in accordance with Facility Operations Director (FOD) requirements; and
- ensure that follow-through actions (e.g., clean-up, recycle, waste disposal, equipment removal, and secure storage) are completed.

Lessons learned; safety, security, and environmental issues; coordination issues; and unexpected conditions.


Suggested improvements to enter into the Job Hazard Analysis (JHA) Tool, FootPrints, or other Integrated Work Control data bases supported by [Lessons Learned](#).




Other recommendations for improvements to performing this activity. State the positive attributes of this activity.

Completion Statement

Name (print) of PIC/Z #:	Signature	Date
--------------------------	-----------	------

**Attachment F20-1
Form 2100A - Integrated Work Document (IWD)**

 Subcontractor IWD – (Subcontract Activity Specific Information)			
Subcontract#		Company Name:	
Revision #:		Activity/Task Title:	
Work Document #: (WO # / Task)		Subcontractor Planner Name	Z# Date
TA:	Building:	Room:	Additional Location Description:
<u>Activity Description/Overview:</u>			
<p>List Names of Hazard Analysis (HA) Team</p> <p align="right">Date HA Performed</p>			
<u>PRECAUTIONS/LIMITATIONS/PREREQUISITES:</u> <i>(include training/authorizations, approved permits, and area postings)</i> <ol style="list-style-type: none"> If steps cannot be completed as described, or if unforeseen situations occur, STOP WORK, stabilize the situation, contact your supervisor, the LANL POC and await further instructions before proceeding. Training required to perform this activity: <ul style="list-style-type: none"> Reference LANL AP-MSS-001 Subcontractor Training Matrix List additional Trainings, certifications, licenses required to perform this activity <ul style="list-style-type: none"> ○ ○ 			
<u>GENERAL HAZARDS (identify hazards and associated controls)</u> The following PPE is required: <ul style="list-style-type: none"> Safety Shoes Safety Glasses with side shields Slips, Trips and Falls <ul style="list-style-type: none"> Be aware of ground and floor conditions. Back Strains <ul style="list-style-type: none"> Use proper lifting and bending technique at all times 			
1.			
2.			
3.			

 Subcontractor IWD – (Subcontract Activity Specific Information)			
Subcontract#		Company Name:	
Revision #:		Activity/Task Title:	
Work Document #: (WO # / Task)		Subcontractor Planner Name	Z# Date
TA:	Building:	Room:	Additional Location Description:
			
1.			
			
2.			
NOTE:			
3.			
4. CONTACT the LANL POC and inform them the work is completed. Complete all the required documentation and return the Master Work Package to the Area Work Control Office.			
<i>Insert Rows above for additional Tasks/Steps or attach pages to clearly communicate ESH&Q/S&S hazards and associated controls.</i>			

IWD Type <input type="checkbox"/> Moderate-Hazard <input type="checkbox"/> High-Hazard/Complex <input type="checkbox"/> Standing IWD	The Subcontractor line manager approves work indicating that they have confidence that the IWD/WCD was properly prepared and that the IWD was jointly prepared with the Contractor, the IWD clearly defines Subcontractor provided work tasks/steps linked to hazards and controls associated with the work to be performed, that the work will be performed within ES&H/S&S requirements, in accordance with this IWD, and within facility requirements and capabilities; and that workers are competent. Signature: _____ Z# _____ Date: _____
Subcontractor PIC Signature _____ Z# _____	
Document Preparer Signature _____ Z# _____ STR or Designee Signature _____ Z# _____ LANL ES&H Rep Signature _____ Z# _____	

The Facility Operation Director (FOD) approval indicates that the work is appropriate to be conducted in the facility, the work is bounded by the Documented Safety Analysis (DSA), and work performed in accordance with the IWD/WCD will meet applicable Laboratory environmental, safety, and security requirements, DOE Orders, and other applicable regulatory requirements; and that site hazards have been identified and controlled

FOD or FOD Rep Signature _____

Z# _____

LANL ESO Signature (if required) _____

Z# _____

**Reviewed by SUBCONTRACTOR
ES&H Representative**

Signature

Z# _____ Date: _____

Attachment F20-2
IWD Validation and Release Form 2102A
 Pre-Job Brief Content

- What are the critical steps or phases of this activity?
- How can we make a mistake at that point?
- What is the worst thing that can go wrong?
- What controls, preventive measures, and bounding conditions are needed?
- What work permits are required and how will we meet their requirements?
- What are the handoffs and coordination requirements among workers and multiple PICs?
- Are there hold-points including those that require sign-offs?
- What are the stop work responsibilities and expectations (e.g. for unanticipated conditions or hazards)?
- How would we respond to alarms and emergencies?
- Are there lessons learned from previous similar work?
- Is other information needed to perform this activity in a safe, secure, and environmentally responsible manner?
- Does everyone agree to the work tasks/steps, hazards, and controls and commit to follow them?

PRE-JOB BRIEF ATTENDANCE ROSTER	
By signing below, I agree to the following: <ul style="list-style-type: none"> • I understand the work, the hazards, and the controls. ▪ I agree to follow the work steps and implement the controls as written. ▪ I agree to stop work when conditions or hazards change or when I encounter unexpected conditions during the execution of work, or when work cannot be performed as written, or instructions become unclear during execution. ▪ I confirm that I am authorized, qualified, and, fit to perform the work. 	
Worker (Signature / Z # / Date) Required	Worker (Signature / Z # / Date)
Worker (Signature / Z # / Date)	Worker (Signature / Z # / Date)
Worker (Signature / Z # / Date)	Worker (Signature / Z # / Date)
Worker (Signature / Z # / Date)	Worker (Signature / Z # / Date)
Worker (Signature / Z # / Date)	Worker (Signature / Z # / Date)
WORK RELEASE	
By signing below, I have verified the following: <ul style="list-style-type: none"> • I have jointly conducted a walkdown with workers to confirm the IWD can be performed as written, required initial conditions and other prerequisites are in-place. • The assigned workers are authorized and are qualified to perform the work in a safe, secure, and environmentally responsible manner. • I have conducted the pre-job briefing, and all workers have been briefed. • I have ensured coordination as required by the STR. 	
PIC (Signature / Z # / Date) Required	
Alternate PIC Signatures when PIC authority is assumed the first time (Note: alternate PICs are required to sign only once, but formal handoff and employee notification are required for each PIC change).	
Alternate PIC (Signature / Z# / Date) Required _____	
Alternate PIC (Signature / Z# / Date) Required _____	
Alternate PIC (Signature / Z# / Date) Required _____	

Form 2102A

Penetration Permit

Work Request # (if applicable)	Date Permit Submitted	IWD Number (if applicable)
--------------------------------	-----------------------	----------------------------

General Information

Location (TA/Bldg/Room)
Job Description and Controls Specific to the Task (e.g., and depth of penetration, material to be penetrated, tools)
Personal Protection Equipment (PPE) Description (e.g. dielectric gloves, boots)

Class 1 Penetration Checklist (hollow walls, ceilings, floors, roofs, or 1 1/2 inches or less into solid or soft materials)

	Complete
Checked behind walls, under floors, or through false ceilings for hazards?	<input type="checkbox"/>
Verified metal stud locations?	<input type="checkbox"/>
Less conductive tools to be used?	<input type="checkbox"/>
Masonry bits and hand tools to be used for initial penetration?	<input type="checkbox"/>
Drill bit stops or short drill bits (<1½ inches) to be used?	<input type="checkbox"/>
Electrical tools equipped with Ground Fault Circuit Interrupters (GFCIs) and double insulated?	<input type="checkbox"/>
GFCIs tested?	<input type="checkbox"/>
PPE specified and obtained?	<input type="checkbox"/>
Checklist completed by	Z-Number
	Date

Class 2 Penetration Checklist (*into solid or soft material greater than 1 1/2 inches in depth*)

	Completed	
Reviewed historical records, engineering plans, and drawings? List what was revealed:	<input type="checkbox"/>	
Facility Operations Director/designee, customer/requester, Electrical Safety Officer (ESO) or other personnel consulted for potential hidden hazards? List any such hazards:	<input type="checkbox"/>	
Visually inspected proposed location of penetration?	<input type="checkbox"/>	
De-energized and locked/tagged-out hazardous energy sources as required?	<input type="checkbox"/>	
Two independent Nondestructive Testing (NDT) devices used to determine if additional hazards exist? List devices and results here:	<input type="checkbox"/>	
NDT used to determine wall reinforcement?	<input type="checkbox"/>	
Electrical tools protected with GFCIs and double insulated?	<input type="checkbox"/>	
GFCIs tested?	<input type="checkbox"/>	
PPE specified and obtained?	<input type="checkbox"/>	
Desired depth of penetration:		
Method/control to be used to insure penetration limited to maximum depth:		
Visual verification method to be utilized		
Visual verification completed by	Date	
Checklist completed by	Z-Number	Date

Review, Approval, and Authorization

Authorization: I have discussed the hazards and controls with the workers and verified that they are trained/qualified to perform the work.

Responsible Line Manager/Designee Approval	Date
ESO Approval (<i>Class 2 Only</i>)	Date
FOD/Designee Approval (<i>Class 2 Only</i>)	Date

**Los Alamos National Laboratory
Environmental Compliance Programs (EPC-CP)
Unplanned Release Report**

Form Completed By:		Telephone:		Group:	
Spill Details		Spill Owner (Specify): <input type="checkbox"/> LANS, LLC <input type="checkbox"/> Subcontractor:			
Date of Spill/Date Spill Discovered:					
Location:					
Material Spilled:		<input type="checkbox"/> Anti-freeze/coolant		<input type="checkbox"/> Gasoline	
<input type="checkbox"/> Hydraulic Fluid		<input type="checkbox"/> Steam Condensate		<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Potable Water		<input type="checkbox"/> Lubricants/oils			
<input type="checkbox"/> Diesel		<input type="checkbox"/> Refrigerant Oil			
Volume Spilled:		Waste Volume Generated:			
Source of Spill:		<input type="checkbox"/> Hydraulic Line		<input type="checkbox"/> Radiator	
Vehicle ID: _____		<input type="checkbox"/> Potable Water Line		<input type="checkbox"/> Condensate Line	
Equipment ID: _____		<input type="checkbox"/> Fire Suppression System		<input type="checkbox"/> Other: _____	
		<input type="checkbox"/> Fuel Tank			
Describe the spill response in chronological order. Include response personnel, steps taken to contain the spill, and steps/spill control equipment used to clean it up. Please indicate if corrective actions have been completed and describe actions taken to prevent spill recurrence:					
D. Corrective Actions Completed: _____					
Did the spill enter or impact any of the following? (Check as many as apply)		<input type="checkbox"/> Floor Drain, if so please indicate affected facility			
<input type="checkbox"/> RCRA Treatment Storage Disposal Facility		<input type="checkbox"/> Watercourse/drainage area, if so please indicate			
<input type="checkbox"/> RCRA Satellite Accumulation Area		<input type="checkbox"/> Solid Waste Management Unit/Area of Concern, if so please indicate			
<input type="checkbox"/> RCRA <90 Day Storage Area		<input type="checkbox"/> None			
<input type="checkbox"/> NPDES MSGP Facility					
Did the spill occur inside or outside a building?		<input type="checkbox"/> Inside		<input type="checkbox"/> Outside	
Did the spill occur on: (Check as many as apply)		<input type="checkbox"/> Concrete		<input type="checkbox"/> Asphalt	
		<input type="checkbox"/> Carpeted Floor		<input type="checkbox"/> Graveled/Rocky Area	
		<input type="checkbox"/> Tile		<input type="checkbox"/> Soil/Vegetated Area	
		<input type="checkbox"/> Wooden floor/deck		<input type="checkbox"/> Other: _____	
Samples Collected:		<input type="checkbox"/> Soil		If samples were collected, indicate analytical suite:	
<input type="checkbox"/> None		<input type="checkbox"/> Air			
<input type="checkbox"/> Water		<input type="checkbox"/> Other: _____			
Certification					
I certify that I am knowledgeable about the information on this form. The information, to my knowledge, is true, accurate, and complete.					
Name of Certifying Official:		Organization:		Date:	
Certification:					
Completed by ENV-CP Personnel					
Received: _____		Severity Index: _____		Causal Analysis: _____	
				<input type="checkbox"/> Non-Reportable <input type="checkbox"/> Reportable	

Attachment F59-1
Safety and Environmental Performance Citation

Citation No.: (YR-SC-XXX)	Subcontract No.	SUBCONTRACTOR Name	Page 1 of ____
Brief Title/Description of Safety and Environmental Performance Incident			
Specified Requirement (identify requirement and reference document (e.g. General Safety Rules, Subcontractor Site-Specific ES&H Plan))			
Description of Safety and Environmental Performance Incident (provide detailed information; include names, dates, locations)			
Immediate actions to be taken			
STR Name (Print)	Signature	Date	Phone Pager

<p>Corrective Actions taken (provide detailed information; include names, dates and locations)</p>				
SUBCONTRACTOR Name (Print)	Signature	Date	Phone	Pager
<p>Actions Complete:</p>				
SUBCONTRACTOR Name (Print)	Signature	Date	Phone	Pager

Operations Security (OPSEC) Plan

For

RFP #511017

Crossroads 2021

7/17/18

Ensure Proper Classification of Document When Complete

INTRODUCTION

OPSEC is a systematic and proven process by which CONTRACTOR and its supporting subcontractors can deny to potential adversaries information about capabilities and intentions by identifying, controlling and protecting generally unclassified evidence of the planning and execution of sensitive LANL activities. The principles of OPSEC are easy to remember.

- What information do you want to protect?
- Who wants your information?
- How is your information vulnerable?
- What is the risk for your information?
- How can you protect your information?

The OPSEC process is most effective when fully integrated into all planning and operational processes. The OPSEC process involves five steps: (1) identification of critical information, (2) analysis of threats, (3) analysis of vulnerabilities, (4) assessment of risk, and (5) application of appropriate countermeasures.

SCOPE

This plan will provide information designed to show all Subcontract Workers what information needs to be protected, what the threat is, what the potential vulnerabilities are, what to do with the risk, and what countermeasures can be applied to prevent information loss.

This plan is applicable to all Subcontract Workers.

DEFINITIONS

Critical Information (CI):

Critical Information is information concerning sensitive activities, whether classified or unclassified, which is vitally needed by adversaries or competitors for them to plan and act effectively. CI is information about intentions, capabilities, or activities that must be protected from loss to keep an adversary from gaining a significant military, economic, political, or technological advantage.

The process to identify critical information begins with an examination of the totality of the activities involved in performance of this subcontract (hereinafter referred to as the "Project") to determine what exploitable but unclassified evidence of classified or sensitive activity is vulnerable to adversary acquisition in light of the known capabilities of potential adversaries. Such evidence is usually derived from openly available data. Certain "indicators" may be pieced together or interpreted to discern critical information. Indicators commonly stem from the routine administrative, physical, or technical actions taken to prepare for or execute the Project.

Indicators:

Indicators are sources of information that, if exploited by an adversary or competitor, could reveal critical information. An indicator can be identified by asking the question, "If I were an adversary or competitor, where would I go to obtain critical information?"

Indicators are detectable actions that can be heard, observed, or imaged. Obtained by an adversary, they could result in adversary knowledge or actions harmful to friendly intentions. They include such things as personnel or material actions and movements that can be observed, public release conversations or documents, and habitual procedures when conducting a given type of operation or test. All detectable indicators that convey or infer critical information must be identified and protected if determined vulnerable.

Threat Analysis:

Threat Analysis is a process in which information about a threat or potential threat is subjected to systematic and thorough examination in order to identify significant facts and derive conclusions.

Threat analysis is an examination of an adversary's technical and operational capabilities, motivation, and intentions to detect and exploit security vulnerabilities.

When considering a threat, one must look at the CI and the Project in general and look at that information as an adversary would. A determination will need to be made as to who would want this technology, who would want to discredit this Project, who would like to cause harm to the Project participants, or who would like to do other nefarious activities directed at the Project. Once the adversary (ies) is/are established, an analysis also needs to be done on capabilities, access, determination, etc.

Analysis of Vulnerabilities:

Analysis of vulnerabilities is a systematic evaluation process in which qualitative and/or quantitative techniques are applied to detect vulnerabilities and to arrive at an effectiveness level for a safeguards and security system to protect specific targets from specific adversaries and their acts.

Determining vulnerabilities involves a systematic analysis of how the Project is actually conducted by the primary and supporting Project team members. The Project must be viewed as an adversary might view it. Actions and things that can be observed or other data that can be interpreted or pieced together to derive critical information must be identified. These potential vulnerabilities must be matched with specific threats.

Once it is determined what an adversary needs to know and where that information is available, it is necessary to determine if it is possible for the adversary to acquire and exploit the information in time to capitalize on it. If so, vulnerability exists.

Risk Assessment:

Risk assessment is an evaluation of potential threats against a safeguard and security interest and the countermeasures necessary to address potential vulnerabilities. It is a five-step process that provides the decision-maker with a firm foundation upon which to make an informed decision. During a risk assessment, the value of the information, analysis of the threat, and determination of the information's vulnerability are conducted. Following the completion of these three activities, a determination of the risk rating is made and countermeasures are considered and implemented, as necessary.

Risk assessment is essentially the process of balancing vulnerability against the threat, then deciding if the resultant risk warrants applications of countermeasures. The determination of risk is a demanding step in the OPSEC Process. It requires a degree of subjective decision making based on the best estimate of an adversary's intentions and capabilities.

Included in the assessment of an adversary's capability is not only his ability to collect the information but also his capability to process and exploit (evaluate, analyze, interpret) in time to make use of the information. In order to complete the risk assessment, it is necessary to combine this information (i.e., the possibility of the adversary exploiting the information, with the resultant impact on the Project). This process should result in a list of recommendations along with an estimate of the reduced impact upon the operation as achieved through their application. The decision maker can then weigh the cost of recommended OPSEC countermeasures in terms of resources and operational effectiveness against the impact of the loss of critical information.

Application of Appropriate Countermeasures:

A countermeasure is anything that effectively negates an adversary's ability to exploit vulnerabilities. The most effective countermeasures are simple, straightforward, procedural adjustments that effectively eliminate or minimize the generation of indicators. Following a cost-benefit analysis, countermeasures are implemented in priority order to protect vulnerabilities having the most impact on the Project, as determined by the appropriate decision maker.

RESPONSIBILITIES

CONTRACTOR and SUBCONTRACTOR shall jointly perform the OPSEC Five-Step Process for this Project.

CONTRACTOR is responsible to develop a list of CI and associated Indicators for this Project.

CONTRACTOR and SUBCONTRACTOR are responsible to look at the vulnerabilities associated with this Project.

SUBCONTRACTOR is responsible to determine the risk for all potential vulnerabilities and to implement any recommended countermeasures.

SUBCONTRACTOR is responsible to complete an OPSEC plan for this Project.

All Subcontract Workers are responsible for reading this OPSEC Plan when finalized, and before work begins.

CRITICAL INFORMATION

The CI for this Project is:

- Information about Laboratory management and organizational structure.
- Information about the location and configuration of LANL facilities.
- Information about nature or status of equipment in use at LANL facilities.
- Project specifications (including deadlines, work scope, project status, budgets, etc.)
- Specific information about Laboratory emergency response tools, capabilities, or techniques.
- Information about the capabilities and limitations of LANL security, safety, and business systems.
- Any other critical information identified by the contractor or subcontractor during the performance of work.

INDICATORS

The indicators for this Project are:

- Documents, discussions, or other information sources that contain classified information, controlled unclassified information, or other information that would be useful to an adversary.
- Observable behaviors that indicate the nature of the subcontractor's work with/for LANL.
- Patterns of behavior related to work on the Project (always performing LANL work at a certain time, making conference calls on the same day every week).
- Abrupt changes in work schedules or patterns.
- Information published by contractor or subcontractor workers in social media, promotional materials, personal correspondence, or other unapproved platforms.
- Observable increases in safety or security controls or procedures.

THREAT

The threat for this Project is:

- All threats identified in the baseline LANL threat profile.
- Foreign governments.
- Commercial entities.
- Opportunistic criminals.
- Terrorist organizations (foreign or domestic).
- Political organizations opposed to the Laboratory's goals.
- Any additional threats specific to the subcontractor performing the work.

POTENTIAL VULNERABILITIES

The ways that information is potentially vulnerable for this Project:

- Unauthorized access to manuals, procedures, blueprints, work documents, technical specifications, or other documentation provided by the Laboratory or subcontractors.
- Unauthorized access to emails, letters, faxes, voice messages, or other forms of communication from Laboratory or subcontractor workers.
- Overhearing direct conversations or conversations over telephones, teleconferencing systems, or other electronic systems.
- Access to itineraries, plans, invoices, bills, etc. that indicate that timing or nature of work performed for/at LANL.
- Access to specific information about LANL contracts (specifications, invoices, work scopes, timelines, project plans, budgets, purchase orders, etc.)
- Access to project-related work materials placed in recycle bins or trash containers.
- Access to information published on social media, web pages, email lists, newsletters, trade publications, technical publications, or other communications sources.
- Failure to properly identify, mark, protect, and destroy sensitive material according to Laboratory requirements.
- Processing, transmitting, or storing LANL data on unapproved information systems.
- Other vulnerabilities identified in the LANL scope of work.

RISK

The following potential vulnerabilities are acceptable risks:

- Allowing access to LANL data, information systems, networks, and equipment by authorized personnel for purposes directly related to the approved scope of work.
- Sharing specific information about the nature and configuration of LANL facilities and equipment with authorized personnel.
- Sharing specific information about LANL security and safety measures with authorized personnel.
- Allowing access to sensitive LANL information related to the scope of work for the subcontract with authorized personnel.

The following potential vulnerabilities will be countered: All information provided by LANL or its subcontractors will be transmitted, processed, stored, and destroyed according to LANL information security requirements.

- Subcontractor personnel will be reminded not to discuss specific information about LANL facilities, equipment, safety and security measures, and organizational structure with any unauthorized person.
- Subcontractor personnel will discuss information related to the authorized scope of work only with subcontractor or LANL workers directly involved with the work being performed.
- Subcontractor personnel will perform LANL work only on approved information systems.

CONCLUSION

By following the OPSEC Five-Step process this Project has identified what needs to be protected, what the threat is, what the vulnerabilities are, what the risk is, and what countermeasures are needed to be developed to protect any and all information associated with the Project. By doing so, the Project team will have effectively mitigated any potential information loss.

This OPSEC plan has been reviewed and approved for RFP #574468.

Matthew Pierce
ADMASER OPSEC Coordinator
mpierce@lanl.gov
665-4377

**MATTHEW
PIERCE (Affiliate)**

Digitally signed by
MATTHEW PIERCE (Affiliate)
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EXHIBIT G CYBER SECURITY**SECURITY REQUIREMENTS****TABLE OF CONTENTS**

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GC 1.0 Scope

This Exhibit G Cyber Security pertains to the storage and processing of LANL or TRIAD data on information systems and networks not owned or managed by Los Alamos National Laboratory (LANL). This exhibit defines the requirements for information security only, and does not address security requirements pertaining to personnel or physical security.

For any Statements/Scopes of Work that include any personnel or physical security topics (such as but limited to obtaining security clearances, badges, physical access to the LANL site, storage of LANL paper documents, etc.) an additional Physical Security Exhibit G will be needed will need to be incorporated into the contract.

GC 2.0 Security Requirements

All data created or provided under this subcontract ("LANL Data" or "TRIAD Data") is and shall remain the property of CONTRACTOR or the United States Government; and shall in no way become attached to the services under this subcontract; nor shall SUBCONTRACTOR have any right to the data, unless otherwise stated in this subcontract.

SUBCONTRACTOR has an affirmative duty to immediately notify the Subcontract Administrator in writing if performance of the Scope of Work (SOW) contradicts requirements below. In addition, if there is contradiction during the performance of the SOW, CONTRACTOR reserves the right to impose additional security requirements on SUBCONTRACTOR as deemed necessary and appropriate.

SUBCONTRACTOR shall comply with all requirements specified in this exhibit. Regardless of the performer of the work (e.g. sub-tier or third party supplier/subcontractor) SUBCONTRACTOR shall ensure compliance with the provisions of this exhibit.

2.1 Federal Acquisition Regulation (FAR) and Department of Energy Acquisition Regulation (DEAR)

The FAR and DEAR clauses which are incorporated by reference herein shall have the same force and effect as if printed in full text. Full text of the referenced clauses may be accessed electronically at website address:

FAR: <http://farsite.hill.af.mil/vffara.htm>

DEAR: <http://farsite.hill.af.mil/vfdoea.htm>

2.1.1 The following alterations shall apply to FAR and DEAR clauses wherever necessary to make the context of the unmodified FAR and DEAR clauses applicable to this subcontract:

- The term "Contractor" shall mean "SUBCONTRACTOR;"
- The term "Contract" shall mean this subcontract; and
- The term "DOE", "Government," "Contracting Officer" and equivalent phrases shall mean CONTRACTOR and/or CONTRACTOR'S representative, except the terms "Government" and "Contracting Officer" do not change when a right, act, authorization or obligation can be granted or performed only by the Government or the prime contract Contracting Officer or his duly authorized representative; or where specifically modified herein.

2.1.2 Each of the individual FAR/DEAR clauses listed below is incorporated by reference into this subcontract when the condition(s) for applicability is/are met.

Clause Number	Title and Date	Condition of Applicability
DEAR 952.204-77	Computer Security (Aug 2006)	Applies when Subcontractor has access to computers owned, leased or operated on behalf of the DOE.
FAR 52.204-9	Personal Identity Verification of Contractor Personnel (Jan 2011)	Applies when Subcontractor has routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system.

2.2 Department of Energy (DOE) Directives Incorporated by Reference

When requested by CONTRACTOR, SUBCONTRACTOR shall provide such information, assistance and support as necessary to ensure CONTRACTOR'S compliance with the following DOE/NNSA Directives, as applicable to the scope of work.

SUBCONTRACTOR shall comply with the requirements of the Contractor Requirement Document (CRD) attached to a Directive when required by such CRD. The Directives are prefaced with certain conditions for applicability to the subcontract. A referenced Directive does not become effective or operative under this subcontract unless and until the conditions precedent (i.e., condition of applicability) is/are met through the scope of work. The DOE Directives referenced herein may be found at <http://www.directives.doe.gov/>.

Clause Number	Title	Conditions of Applicability
NNSA SD 205.1	Baseline Cyber Security Program	Applies if contract involves National Security Systems that collect, process, store, display, create, disseminate, or transmit information.
DOE O 205.1B Chg 3	Department of Energy Cyber Security Program	Applies if contract includes access to DOE unclassified or classified information and information systems used or operated by CONTRACTOR.
DOE O 206.1 Attach. 1 CRD	Department of Energy Privacy Program	Applies if contract includes activities that may include collecting, processing, storing, maintaining or accessing LANL PII information or data.
DOE O 471.6 Chg 2 Attach. 1 CRD	Information Security	Applies if contract includes access to unclassified or classified information and/or matter controlled by statutes, regulation, or DOE/NNSA policies.
DOE O 471.3	Identifying and Protecting Official Use Only Information	Applies if contract includes the access to Official Use Only (OUO) which includes Personally Identifiable Information (PII) and Export Controlled Information (ECI) in electronic/digital format. Includes guidelines to the protection, storage, and transmission of OUO information.
DOE M 471.3-1	Manual for Identifying and Protecting Official Use Only Information	Applies if contract includes the access to Official Use Only (OUO) which includes Personally Identifiable Information (PII) and Export Controlled Information (ECI) in electronic/digital format. Includes guidelines to the protection, storage, and transmission of OUO information.
DOE O 471.1B	Identification and Protection of Unclassified Controlled Nuclear Information	Applies if contract includes the access to Unclassified Controlled Nuclear Information (UCNI) in electronic/digital format. Includes guidelines to the protection, storage, and transmission of UCNI information.

2.3 Goal of Zero Security Incidents.

SUBCONTRACTOR and its lower-tier subcontractors shall strive to eliminate all security events, incidents, and adverse impacts to national security.

GC 3.0 General Security

3.1 Cyber Information Security Training for Work Performed On-site

- 3.1.1 All SUBCONTRACTOR personnel who will have access to a LANL computer, network or system shall complete the Initial Computer Security Briefing as soon as access is granted to LANL information system resources. All SUBCONTRACTOR personnel who are on-site shall also complete Annual Security Refresher training. New users may have access to training systems in the Badge Office in the Otowi Building or at the White Rock Training Center. Most computer training is on-line and open to the public <https://extrain.lanl.gov/>
- 3.1.2 All SUBCONTRACTOR personnel required to take the Initial Information Security Briefing will also be required to complete the Annual Information Security Refresher each year (47075) Annual Information Security Refresher (AISR). All other required Cyber Information Security training identified in the table below shall be completed prior to computer access and prior to performing the assigned function that the training prepares the worker to perform.

Required Course	Course Title - Required For	Frequency	Estimated Time to Complete Training
Cyber Information Security – Only for on-site access or access to LANL information systems			
	Initial Information Security Briefing - All Computer Users / web	Once	1 hr.
	Annual Information Security Refresher – All Computer Users / web	12 months	30 min.
	Classified Computer Security - Classified Computer Users /web	Once	4 hrs.

3.2 Reporting Security Incidents

This subsection contains requirements for identifying and reporting confirmed or reasonably suspected incidents of security concern. Such incidents may involve issues associated with Personally Identifiable Information (PII), controlled unclassified information (CUI), classified matter, computer systems, nuclear materials, secure communications, personnel security, and physical security occurring on LANL property, Laboratory-leased property or SUBCONTRACTOR-owned property. SUBCONTRACTOR personnel shall comply with the following requirements.

- 3.2.1 *Immediately* upon discovery of a confirmed or reasonably suspected incident of security concern, compromise of PII, or potential threats and/or vulnerabilities involving LANL data utilized by the SUBCONTRACTOR, report to the Security Incident Team (SIT) at (505)665-3505 during regular business hours.
- 3.2.2 Any potential compromise of PII shall be reported *immediately* upon discovery to the SIT. A potential compromise of PII is considered a serious information security incident because of the possibility of significant adverse consequences to the individual whose data has been compromised.
- 3.2.3 Details of a report of a confirmed or reasonably suspected incident of security concern shall be made only in person or through a secure communication. A non-secure telephone, non-secure fax, non-secure voice mail or non-secure e-mail shall not be used to report a potential incident of security concern.
- 3.2.4 Contact requirements outside of normal business hours: For all incidents contact the duty officer through the Protective Force at (505) 665-7708, *immediately* after discovery of a potential incident of security concern.

3.3 LANL Data Owner Responsibilities

3.3.1 Informing the SUBCONTRACTOR

The LANL Data Owner(s) will inform the SUBCONTRACTOR of the sensitivity and classification of data that may be utilized in performance of this subcontract.

3.4 SUBCONTRACTOR Responsibilities

SUBCONTRACTOR personnel shall ensure that the LANL Data Owner has specified the data sensitivity and/or classification of all data that will be collected, created, processed, transmitted, stored, or disseminated by SUBCONTRACTOR. SUBCONTRACTOR shall ensure its workers are knowledgeable of the data classification associated with this subcontract.

GC 4.0 Foreign National Access to LANL Information / Data

CONTRACTOR reserves the right to limit or disallow foreign national access to data deemed sensitive based upon classification or export control guidelines. Approval for a foreign national to work on a LANL project is not required if the work involves ONLY information that is open, non-sensitive and routinely published in the public domain.

If the above criteria is not met, approval for a foreign national to work on a LANL project off-site must be obtained from the LANL Foreign Visits and Assignments office PRIOR to commencing work on the Subcontract. The individual who is hosting a foreign national shall be a CONTRACTOR employee and a US citizen.

Contact information for Foreign Visits & Assignments (FV&A) is foreignvisits@lanl.gov

GC 5.0 Data Security and Handling

5.1 Controlled Unclassified Information (CUI)

CUI is unclassified with the potential to damage government, commercial, or private interests if disseminated to persons who do not have a need-to-know (NTK) the information to perform their jobs or other DOE-authorized activities. The requirements for accessing, storing, marking, reproducing, receiving, transmitting, and destroying different types of CUI vary according to the directives from which the requirements are derived. Ensure access to unclassified information is granted only to persons who have a NTK for the information in the performance of their duties under this subcontract.

CUI consists of the categories of information listed below:

- Official Use Only (OUO), which includes Personal Identifiable Information (PII), and Export Controlled Information (ECI)
- Unclassified Naval Nuclear Propulsion Information (U-NNPI)
- Reactor Safeguards Information (RSI)
- Unclassified Controlled Nuclear Information (UCNI)

5.1.1 Access

- No security clearance is required to access CUI; authorization based on NTK is required
- If the CUI information is ECI, access is restricted to US persons (defined as citizens and Lawful Permanent Residents), and to those authorized according to US export control regulations.
- Access to U-NNPI must be granted only to US citizens who have a need to know (NTK).
- UCNI is certain unclassified but sensitive government information whereby unauthorized dissemination is prohibited; access is permitted only to those authorized for routine or special access and those who have a need-to-know (NTK). Only a qualified Reviewing Official can identify and mark UCNI. Contact the LANL Classification Group at 505-667-5011 for assistance.

5.1.2 Storing

- CUI including UCNI stored on a computer (desktop, server, mobile device) or offline storage shall be restricted to only those who have a need-to-know the specific UCNI in the performance of official duties or of DOE-authorized activities and shall meet LANL password, authentication, file access control, or encryption control requirements. [See DOE O 471.1 B Identification and Protection of Unclassified Controlled Nuclear Information for specific guidance.](#)
- Storing/processing of Personal Identifiable Information (PII) on a Non-LANL information system will require a Privacy Impact Analysis (PIA). The LANL Data Owner can request a copy of the PIA via email to Vendor-IT-Security@lanl.gov.

5.1.3 Transmitting

- Electronic documents (including but not limited to Word, Excel, Adobe, and WinZip) should be password protected prior to transmitting outside of LANL network or SUBCONTRACTOR's network.
- When OUO is sent over internal networks, including e-mail or Internet, encryption is not required but is recommended.
- If CUI information that is categorized as U-NNPI, UCNI, or RSI will be disseminated over telecommunication circuits (including telephone, fax, radio, e-mail or Internet) outside of LANL, it must be encrypted with NIST-Federal Information Processing Standard (FIPS) 140-2 validated encryption. (<http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140val-all.htm>)

5.1.4 Destroying and Sanitization

Users are not required to destroy electronic media that contains CUI. However, disks must be purged per standards established by NIST SP 800-88, Guidelines for Media Sanitization prior to their being discarded or reused. (<http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf>)

5.2 TRIAD Proprietary Information (TPI)

TRIAD, LLC (TRIAD) Contractor Owned and Proprietary Information (TPI). TPI is not CUI by any government definition, but it is controlled unclassified contractor information with handling requirements. The designation of TPI only applies to TRIAD-owned records, and must not be applied to U.S. government-owned records or documents.

5.2.1 Transmitting

The requirements for transmitting and receiving TPI are identical to the requirements for OUO.

5.3 Access to Classified Information on LANL Information Systems

Ensure access to classified information is granted only to persons with the appropriate access authorization (Clearance) and need-to-know (NTK) in the performance of their duties under this subcontract. SUBCONTRACTOR's access to the data is granted in terms of the Vendor System Security Plan (VSSP).

5.3.1 Non-Government Owned Classified Systems

SUBCONTRACTOR personnel shall ensure that any activity that involves processing LANL classified information using a non-government owned information system be documented and approved by the LANL Cyber and Systems Architecture before access is granted. Proof of accreditation from a Federal Authorizing Official of the information system and other documentation (e.g. Memorandum of Understandings, etc.) may be required.

5.4 Export Controlled Information Restrictions

SUBCONTRACTOR shall comply with all U.S. export control laws and regulations, including the provisions of the Export Administration Act of 1979, as amended (50 U.S.C. §2401, et seq.), the U.S. Export Administration Regulations (15 C.F.R. 730-774) promulgated there under, the U.S. Department of Energy's export regulations (10 C.F.R. Part 810), the Arms Export Control Act (22 U.S.C. §2751, et seq.), the Atomic Energy Act of 1954, as amended (42 U.S.C. §2011), and the International Traffic in Arms Regulations, and the sanctions and laws administered by the U.S. Treasury Department, Office of Foreign Assets Control (OFAC).

SUBCONTRACTOR acknowledges that these statutes and regulations impose restrictions on the import and export to foreign countries and foreign nationals of certain categories of items and data and that licenses from the U.S. Department of Energy, U.S. Department of Commerce, U.S. State Department and/or OFAC may be required before such items or data can be disclosed, and that such licenses may impose further restrictions on use of and further disclosure of such data. Further dissemination must be pre-approved by Los Alamos National Laboratory.

SUBCONTRACTOR further acknowledges that the information which CONTRACTOR may disclose to SUBCONTRACTOR pursuant to the Subcontract may be subject to these statutes and regulations.

GC 6.0 Information Security

These requirements apply to any information system or network that SUBCONTRACTOR may use to collect, create, process, transmit, store or disseminate information from/for CONTRACTOR. Unless specifically waived, CONTRACTOR retains ownership of the data that SUBCONTRACTOR may utilize in performance of this subcontract. Regardless of the performer of the work, SUBCONTRACTOR shall ensure compliance with the provisions of this section.

6.1 SUBCONTRACTOR personnel responsibilities

6.1.1 Approvals for connecting non-LANL equipment to LANL networks

SUBCONTRACTOR shall obtain specific approval from the LANL Cyber and Systems Architecture (CSA) prior to connecting any equipment owned or acquired by SUBCONTRACTOR to any LANL network, by means of a Form 1897, Controlled Portable Electronic Device (PED) onsite Authorization Form, <https://irm.lanl.gov/forms/Shared/1897.pdf>

6.1.2 Accountability

SUBCONTRACTOR personnel shall be accountable for their actions on an information system.

6.1.3 Acknowledge Responsibilities

SUBCONTRACTOR personnel shall acknowledge their responsibilities for protecting information systems and electronic information and for complying with any system-specific rules of use. For use of LANL computers, networks or information systems, acknowledgment will be captured during the Initial Information Security Briefing.

6.1.4 Follow the Rules and Regulations

SUBCONTRACTOR personnel shall follow rules and regulations governing the secure operation and authorized use of information systems detailed in this Exhibit G Cyber Security Requirements.

6.1.5 Periodic Assessments

SUBCONTRACTOR shall submit, at the discretion of the LANL CSA, to a periodic assessment to be performed by the LANL Data Owner as to the effectiveness of the information protection mechanisms identified that are implemented

by SUBCONTRACTOR.

6.1.6 Non-Disclosure

SUBCONTRACTOR personnel shall not disclose LANL data collected, created, processed, transmitted, stored, or disseminated by SUBCONTRACTOR in performance of this subcontract, unless each case of such disclosure is specifically approved by the LANL Data Owner and the Subcontract Administrator.

6.1.7 Use of LANL data

SUBCONTRACTOR personnel shall ensure LANL data utilized in the performance of this subcontract is not used for any other purpose that has not been specifically approved by the LANL Data Owner, including testing of new systems or applications or demonstrations of software or systems for the purpose of marketing the SUBCONTRACTOR'S skills or services to customers other than LANL.

6.1.8 Non-Government Owned Classified Systems

SUBCONTRACTOR shall ensure any SUBCONTRACTOR activity that involves processing LANL Classified information using a non-government owned information system be documented and approved by the LANL Information Security Site Manager (ISSM) before access is granted.

Data may only be stored and/or processed on Classified systems that been authorized by a Federal Authorizing Official. CONTRACTOR may require proof of accreditation.

6.2 Processing and/or Storage of LANS/LANL Data on Non-LANL systems

If SUBCONTRACTOR utilizes information systems that store or process TRIAD Data or LANL Data on systems (desktops, servers, laptops, networks, cloud) that are not LANL owned or managed, SUBCONTRACTOR shall comply with requirements outlined in this Exhibit G Cyber Security.

Off-site storage or processing of LANL and TRIAD data is defined in NIST Special Publication (SP) 800-145 as *any connection that involves delivering hosted services over the Internet*.

6.3 Off-Site Access to LANL systems

6.3.1 Remote users who do not process or access Controlled Unclassified Information (CUI) may access LANL systems by fulfilling the following requirements:

6.3.1.1 SUBCONTRACTOR shall work with the LANL data owner to obtain authorization approval to receive a CRYPTOCARD in order to access LANL systems. Instructions are located at <https://cryptocard.lanl.gov> (internal link). Foreign Nationals must have approval from LANL Foreign Visits & Assignments before requesting a CYRPTOCARD

6.3.1.2 SUBCONTRACT Workers shall ensure the following operational controls are implemented:

- Close the browser, cache and delete cookies before leaving the remote system;
- Ensure files from off-site systems have been examined for malicious content (e.g. anti-virus or anti-spyware) before introduction to a LANL information system;
- Ensure virus definition file on off-site computer is the most recent version;
- Ensure any sensitive information that was transmitted to the remote system is protected per FIPS 140.2 by encrypted means;
- Classified information shall not be processed during remote access sessions and is prohibited on any computer that is not approved for classified processing.

6.3.2 Violating remote access requirements outlined above may result in the loss of access to on-site, as well as off-site computing. Other actions may be taken up to and including removal of the Subcontract work from this subcontract.

6.4 Appraisal of Information Security Controls for Moderate and/or High Systems

Los Alamos National Laboratory (LANL) uses the standards for categorization of information and information systems defined in NIST Federal Information Processing Standard Publication 199 (FIPS 199). This standard establishes security categories for both information and information systems. Federal Information Security Management Act (FISMA) defines three security objectives; Confidentiality, Integrity, and Availability. With three potential impact levels defined; Low, Moderate, or High. FIPS 199 found at (<http://csrc.nist.gov/publications/PubsFIPS.html>)

SUBCONTRACTOR's ability to protect sensitive LANL data shall be appraised by the LANL Cyber & Systems Architecture (CSA) prior to processing, transmitting, or storing controlled unclassified information and/or Classified information (defined as FIPS 199 Moderate or High) on their systems.

6.4.1 With the assistance of the LANL Cyber & Systems Architecture (CSA), the SUBCONTRACTOR shall develop the following security forms. These plans must be approved by LANL SCA prior to subcontract award.

- 6.4.1.1 Vendor System Security Plan (VSSP). Additional Security Artifacts (e.g., Disaster Recovery Plans, Evidence of Penetration Tests, System Accreditation Letters, etc.) may be requested in addition to completing the VSSP. More examples are listed above in Section 6.4
- 6.4.1.2 If storing or processing Personal Identifiable Information (PII), a Privacy Impact Assessment (PIA) form is required (Form is provided by LANL). This form must be completed by the LANL Data Owner in conjunction with SUBCONTRACTOR and the LANL Privacy Officer in SCA.
- 6.4.1.3 If storing or processing Protected Health Information (PHI), clearly show HIPAA Compliance per NIST Controls (HIPAA Standards and Implementation Specifications).
- 6.4.1.4 If SUBCONTRACTOR is FedRAMP Authorized, provide the following supporting documents:
 - FedRAMP Test Procedures and Results
 - FedRAMP Control Tailoring Workbook
 - FedRAMP Customer Responsibility Document (CRD)

6.5 Qualification and Validation

Security artifacts will be required for the processing or storage of any Controlled Unclassified Information (CUI) or Classified information or for any other information system characterized by LANL as a Moderate or High using standards established in FIPS 199.

SUBCONTRACTOR shall prove security compliance standards by providing artifacts that meet:

- FedRAMP Authorized certification (<http://www.fedramp.gov>). This is the preferred methodology of establishing and confirming security controls for a cloud service provider; OR
- National Institute of Science Technology (NIST) SP 800-53 security controls. (<http://csrc.nist.gov/publications/PubsSPs.html>) OR
- Proof of Approval to Operate (ATO) from a Federal Authorizing Official (AO)

If SUBCONTRACTOR does not adhere to NIST or is not FedRAMP authorized, an industry recognized equivalency protection security artifacts may be submitted.

Equivalencies should clearly address how SUBCONTRACTOR protects the system and LANL data for the OWASP Top 10 Security Risks: (https://www.owasp.org/index.php/Category:OWASP_Top_Ten_Project)

Examples of equivalencies include but are not limited to:

- SOC1/SSAE-16 Certification
- SOC 2 Certification
- Proof of HIPAA Compliance
- ISO 27001 – ISO 27017
- EU-GPDR
- Official letters from third-party security auditors
- Subcontractor shall provide result of annual tests at least annually
- Matrices of cloud controls and certifications/standards can be found on the Cloud Security Alliance's Cloud Controls Matrix (<https://cloudsecurityalliance.org/group/cloud-controls-matrix/>) and on the Cloud Standards Customer Council's Cloud Security Standards (<http://cloud-council.org/>).

Compliance with these requirements shall be assessed by the LANL Cyber & Systems Architecture (CSA). For questions, contact Vendor security at Vendor-IT-Security@lanl.gov

6.6 Consequences of Noncompliance.

Failure of SUBCONTRACTOR to comply with the requirements of this Exhibit G Cyber Security may result in the imposition of a criminal and/or civil penalty. Activities on LANL systems are monitored and recorded and subject to audit. SUBCONTRACTOR gives its express consent to such monitoring and recording. Any unauthorized access or use of LANL systems and data is prohibited and could subject the SUBCONTRACTOR to criminal and civil penalties and/or immediate termination of the subcontract.

6.7 Required Notifications

SUBCONTRACTOR shall notify the Requester, STR and the Subcontract Administrator immediately, whenever a change in the scope of the work to be performed has been identified or requested. The Requester or STR shall then notify the appropriate security expert so that any security modifications can be made to the approved Exhibit G Cyber Security in response to the change in the scope of work

GC 7.0 Contacts

Name	Telephone
CSA/Cyber Security Office	505-665-1795
Foreign Visits and Assignments	505-665-1572
Immigration Services	505-667-8650
Security Incident Team (SIT)	505-665-3505
Protective Force (After Hours Reporting)	505-665-1279

**EXHIBIT G PHYSICAL SECURITY
SECURITY REQUIREMENTS
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G1.0 Definitions and Acronyms (May 2015)

Definitions and acronyms may be accessed electronically at
<http://www.lanl.gov/resources/assets/docs/Exhibit-G/exhibit-g-definitions-acronyms-green.pdf>

G2.0 Security Requirements (Dec 2017)

SUBCONTRACTOR shall comply with all requirements specified in this exhibit. Regardless of the performer of the work (e.g. sub-tier or third party contractor) SUBCONTRACTOR shall ensure compliance with the provisions of this exhibit. All measures taken by CONTRACTOR to correct Subcontract Workers' non-compliance shall be at SUBCONTRACTOR'S expense, and the cost thereof, including any stipulated penalties resulting from such non-compliance, shall be deducted from payments otherwise due SUBCONTRACTOR. Additionally, when requested by CONTRACTOR, SUBCONTRACTOR shall provide such information, assistance and support as necessary to facilitate CONTRACTOR'S compliance with any DOE Directives that may be applicable to the scope of work.

2.1 DEAR Clauses Incorporated By Reference

- 2.1.1 The Department of Energy Acquisition Regulation (DEAR) clauses which are incorporated by reference herein shall have the same force and effect as if printed in full text.
- 2.1.2 Full text of the referenced clauses may be accessed electronically at
https://www.acquisition.gov/Supplemental_Regulations
- 2.1.3 The following alterations apply only to FAR and DEAR clauses and do not apply to DOE or NNSA Directives. Wherever necessary to make the context of the unmodified DEAR clauses applicable to this subcontract:
- The term "Contractor" shall mean "SUBCONTRACTOR ;"
 - The term "Contract" shall mean this subcontract ; and
 - The term "DOE", "Government," "Contracting Officer" and equivalent phrases shall mean CONTRACTOR and/or CONTRACTOR'S representative, except the terms "Government" and "Contracting Officer" do not change when a right, act, authorization or obligation can be granted or performed only by the Government or the prime contract Contracting Officer or his duly authorized representative; or where specifically modified herein.
- 2.1.4 The following clauses apply as stated in the Instructions.

Clause Number	Title and Date	Instructions
DEAR 952.204-2	Security (May 2002)	Applies when work involves or may involve classified information, access to special nuclear materials or the provision of protective services.
DEAR 952.204-70	Classification / Declassification (Sep 1997)	Applies when work involves or may involve access to classified information.
DEAR 952.204-73	Facility Clearance (May 2002)	Applies when Subcontractor employees/workers are required to possess access authorizations.
CFR 952.247-70	Foreign Travel (Dec 2000)	Applies if foreign travel may be required in order to perform subcontract work. If applicable, authorization is required from DOE prior to traveling.
DEAR 970.5204-1	Counterintelligence (Dec 2000)	Applies when DEAR 952.204-2 Security and DEAR 952.204-70 Classification / Declassification are applicable.
DEAR 970.5223-4	Workplace Substance Abuse Programs at DOE Sites (Dec 2000)	Applies to subcontracts with sites (LANL) controlled by DOE which are operated under the authority of the Atomic Energy Act of 1954.
FAR 52.204-9	Personal Identity Verification of Contractor Personnel (Jan 2011)	Applies when Subcontractor has routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system.

2.2 DOE Directives Incorporated by Reference

When requested by CONTRACTOR, SUBCONTRACTOR shall provide such information, assistance and support as necessary to ensure CONTRACTOR'S compliance with the following DOE/NNSA Directives, as applicable to the scope of work. SUBCONTRACTOR shall comply with the requirements of the Contractor Requirement Document (CRD) attached to a Directive when required by such CRD. The Directives are prefaced with certain conditions for applicability to the subcontract. A referenced Directive does not become effective or operative under this subcontract unless and until the conditions precedent are met through the scope of work. The DOE Directives referenced herein may be found at <http://www.directives.doe.gov/>. Applicable NNSA NAP documents may be provided to SUBCONTRACTOR by the Contract Administrator / Procurement Specialist (CA/PS) upon request.

Clause Number	Title	Instructions
DOE 0142.2A Attach. 2 CRD	Voluntary Offer Safeguards Agreement and Additional Protocol with the International Atomic Energy Agency	Applies to contracts which involve activities potentially subject to application of safeguards by the International Atomic Energy Agency (IAEA)
DOE M 142.2-1 Attach. 1 CRD	Manual for Implementation of the Voluntary Offer Safeguards Agreement and Additional Protocol with the IAEA.	Applies if contract involves activities associated with the IAEA Safeguards Agreement.
DOE 0142.3A Attach. 1 CRD	Unclassified Foreign Visits and Assignment	Applies if contract involves foreign national access to DOE-owned or leased sites/facilities. Applies if contract involves off-site foreign national access to DOE information or technologies that are not releasable to the public.
DOE 0206.1 Attach. 1 CRD	Department of Energy Privacy Program	Applies if contract includes activities that may include collecting, processing, storing, maintaining or accessing LANL PII information or data.
DOE 0452.4A Attach. 1 CRD	Security and Control of Nuclear Explosives and Nuclear Weapons	Applies if contract includes work in support of the Nuclear Explosive and Weapon Security and Control Program.
DOE 0452.8 Attach. 1 CRD	Control of Nuclear Weapon Data	Applies if contract work requires workers to hold a clearance and have a need to know to perform in authorized government function.
DOE 0457.1 Attach. 2 CRD	Nuclear Counterterrorism	Applies if contract involves or could potentially involve accessing or generating nuclear weapon design information.
DOE M 457.1-1 Attach. 2 CRD	Control of Improvised Nuclear Device Information	Applies if contract involves or could potentially involve accessing or generating improvised nuclear device information.
DOE 0460.2A Attach. 2 CRD	Departmental Materials Transportation & Packaging Management	Applies if contract involves transportation and packaging of hazardous or nonhazardous material.
DOE M 460.2-1A Attach. 1 CRD	Radioactive Material Transportation Practices Manual	Applies if contract involves transportation and packaging of radioactive material or radioactive waste.
DOE 0461.2 Attach. 1 CRD	Packaging and Transfer of Materials of National Security Interest	Applies if contract includes packaging and shipment off-site of materials of national security interest.
DOE M 470.4B Chg 2 Attach. 1 CRD	Safeguards and Security Program	Applies when contract requires security training and/or requires a FOCI determination for access authorizations (clearances).
DOE 0470.5 Attach. 1 CRD	Insider Threat Program	Applies when contract includes activities that involve cleared workers, classified information or matter, Special Nuclear Material, nuclear weapons or parts, or when DEAR 952.204-2 is applicable.

Clause Number	Title	Instructions
DOE 0471.18 Attach. 1 CRD	Identification and Protection of Unclassified Controlled Nuclear Information	Applies to work activities that may generate, possess, or have access to information or matter containing UCNII.
DOE 0471.3 Attach. 1 CRD	Identifying Official Use Only Information	Applies if contract involves activities where Official Use Only (OUO) information and documents will be handled, used or generated.
DOE M 471.3-1 Attach. 1 CRD	Manual for Identifying and Protecting Official Use Only Information	Applies if contract involves activities where Official Use Only (OUO) information and documents will be handled, used or generated.
DOE 0471.6 Chg 2 Attach. 1 CRD	Information Security	Applies if contract includes access to unclassified or classified information and matter controlled by statutes, regulation or NNSA policies.
DOE 0472.2 Chg 1 Attach. 2 CRD	Personnel Security	Applies if contract work requires employees to hold a clearance and/or when official duties require access to classified information or matter, or special nuclear material or data.
DOE 0473.3A Attach. 1 CRD	Protection Program Operations	Applies if contract includes responsibilities for operating, administering, and/or protecting DOE & NNSA safeguards and security interests.
DOE M 474.2 Chg 4 Attach. 1 CRD	Nuclear Material Control and Accountability	Applies if contract includes access to nuclear or special nuclear material or data.
DOE 0475.1 Attach. 2 CRD	Counterintelligence Program	Applies if contract work involves access to or use of DOE facilities, technology, personnel, unclassified sensitive information and classified matter.
DOE 0475.28 Attach. 1 CRD	Identifying Classified Information	Applies if contract work includes access to classified information, documents, or material.
DOE 0551.10 Chg 2 Attach. 1 CRD	Official Foreign Travel	Applies if contract work involves or could potentially involve official foreign travel.
DOE 05639.8A	Security of Foreign Intelligence Information and Sensitive Compartmented Information Facilities	Applies if contract work requires access, receipt, storage, processing and/or handling of Foreign Intelligence Information.
NAP 14.3-8	Transmission of Restricted Data Over Secret Internet Protocol Router Network (SIPRNet)	Applies if contract involves the collection, creation, processing, transmission, storage or dissemination of classified DOE or NNSA information on SIPRNet.
NAP 23	Atomic Energy Act Control of Import and Export Activities	Applies if contract involves or could potentially involve CONTRACTOR Tier 2 specifications that reveal a specific nuclear weapon function or nuclear weapon tests and explosions.

2.3 Goal of Zero Security Incidents

SUBCONTRACTOR and any lower-tier subcontractors shall strive to eliminate all security events, incidents, and adverse impacts to national security.

2.4 Cloud Computing Services

If SUBCONTRACTOR anticipates using cloud computing services in the performance of this subcontract, additional security requirements for using those services shall apply as outlined in the "Exhibit G Cyber Security", which is a separate document.

G3.0 General Security (Dec 2017)**3.1 Work site, Security Area, Badge and Data Information**

WORK SITE / TA:3-2327 2405	
X	DOE owned/leased (LANL) or TRIAD owned/leased facility or property
	Subcontractor owned/leased and DOE Owned / Leased (LANL) facility or property
	Subcontractor owned/leased only

TYPE / CATEGORY	
X	Subcontract
	Subcontract Master Task Order
	Subcontract Release
	Purchase Order (will not become a Subcontract)

ON-SITE WORK AREA DESIGNATION	
	General Access Area / Publically Accessible (GAA)
	Property Protection Area (PPA)
X	Limited Area (LA)
	Protection Area (PA)
	Material Access Area (MAA)
X	SCIF, SAPF, certified Vault or Vault Type Room

BADGE TYPE / CLEARANCE LEVEL	
	LANL Generic Uncleared US Visitor badge
	LANL Generic Uncleared US Visitor Escort Required badge
	LANL Uncleared Site-specific badge
	LANL Uncleared Foreign National badge
	LANL Cleared Foreign National badge
	Uncleared DOE badge
	L-Cleared DOE badge
	Q-Cleared DOE badge
	HRP

DATACLASSIFICATION	
X	Classified
	UCNI
X	Controlled Unclassified (OUO, LPI, PII, ECI , AT, NNPI, RSI)
	Unclassified / sensitive
	Unclassified / Public Release

OPSEC PLAN	
X	Required
	Not Required

3.2 Integrated Safeguards and Security Management (ISSM)

ISSM uses a five-step process as the system to perform work securely. ISSM provides a framework to support each worker in fulfilling their security responsibilities. The following five-step process defines a systematic approach to actions taken before, during, and after work is performed. SUBCONTRACTOR shall ensure that the ISSM five-step process (or an equivalent process) is followed by all Subcontract Workers.

(1) Define the Scope of Work.

- (2) Analyze the Security Risk.
- (3) Develop and Implement Security Controls.
- (4) Perform Work within Security Controls.
- (5) Ensure Performance.

3.3 Safeguards, Security and Counterintelligence Awareness

3.3.1 Operations Security (OPSEC) Plan

SUBCONTRACTOR shall develop (with assistance from CONTRACTOR), implement and sustain a DOE OPSEC Plan using the template provided by the Contract Administrator / Procurement Specialist. SUBCONTRACTOR'S OPSEC Plan shall be approved by CONTRACTOR before work may begin at or for LANL. A link to the OPSEC Plan template is <http://www.lanl.gov/resources/exhibit-g.php>

3.3.2 Subcontract Workers shall report all of the following situations to the Office of Counterintelligence and inform the RLM or STR/AdSTR and CA / PS.

- Professional contacts and relationships with sensitive country foreign nationals, whether they occur at one's worksite or abroad.
- All unofficial travel to any DOE sensitive country at least 30 days before departure. (Form 1743)
- All official travel to any DOE sensitive country at least 30 days before departure. Coordinate with LANL host to fill out the necessary paperwork.
- Any suspicious or provocative actions encountered while on travel.
- Suspicious or provocative actions or behaviors on the part of foreign nationals visiting or assigned to LANL.
- Substantive personal relationships with sensitive country foreign nationals (who are not lawful permanent residents), other than family members.
- Business transactions including financial transactions, partnerships, or other business interests or investments with citizens of sensitive countries who are not lawful permanent residents, whether they involve one-time interactions or ongoing financial relationships. (Small payments for things such as house cleaning or other such personal services or financial support provided to family members are not included).
- Any attempts by unauthorized persons to gain access to classified information. (Not limited to DOE sensitive country foreign nationals or foreign nationals; includes US and non-US citizens)

3.3.3 SUBCONTRACTOR shall be alert to and report any of the following to the RLM and STR/AdSTR:

- attempts by unauthorized persons to obtain information;
- unexplained / excessive use of copiers by workers;
- workers living beyond their means;
- unusual foreign travel patterns of workers; and
- personal problems of workers that could affect security or fitness for duty.

3.4 Security Training

3.4.1 SUBCONTRACTOR shall ensure that all Subcontract Workers:


- become familiar with the Integrated Safeguards and Security Management (ISSM) process and its implementation requirements for the work to be performed and their security responsibilities; and
- complete required safeguards, security and cyber-security training as indicated herein.

3.4.2 The training matrix below identifies security training Subcontract workers may be required to complete before beginning work at or for LANL. An "X" before the name of the course indicates that such training is required under this subcontract.

SUBCONTRACTOR management shall review the security requirements indicated below with each worker. A signed official copy of the review and acceptance by the subcontract worker shall be kept on file with SUBCONTRACTOR. Each Subcontract worker's security requirements shall be reviewed with management yearly or whenever the worker's job security duties change.

A link to available web-based training can be found at <https://extran.lanl.gov/>

Required Course	Course Title - Required For	Frequency	Estimated Time to Complete Training
General Security			
X	General Employee Training (GET) - New Hires / Live or web	Once	8 hrs.
X	LANL Emergency Procedures and Protective Actions -All / web	12 months	10 min.
X	Facility Security Officer Orientation – for a FOCI Determination / web	Once	2 hrs.
X	Annual Security Refresher (ASR) – L & Q-cleared Workers / web	12 months	1 hr.
X	Comprehensive Security Briefing - L & Q-cleared Workers / web	Once	2 hrs.
X	Export Control Fundamentals – Based on SOW / web	12 months	30 min.
X	Substance Abuse Awareness -All / web	Once	30 min.
X	Beryllium General Overview -All / web	24 months	30 min.
X	Workplace Violence Awareness -All / web	Once	15 min.
Classified Matter Protection And Control			
	Classified Parts Procedures Self-Study - Classified Parts Custodians / web	Once	30 min.
	CMPC for Custodians - Classified Matter Custodians (CMCs) & Classified Library Custodians (CLCs) / live	Once	2 days - 16 hrs.
X	Classified Matter Protection - Classified Matter Users / web	Once	2 hrs.
X	CMPC User Refresher - Classified Matter Users / web	24 months	1 hr.
Cyber Information Security			
X	Initial Information Security Briefing -All computer Users / web	Once	1 hr.
X	Annual Information Security Refresher - all computer users / web	12 months	30 min.
Human Reliability Program			
	HRP for Managers - Supervisors / web	12 months	30 min.
	HRP Training for HRP Workers - workers / web	12 months	20 min.
Protecting Classified & Sensitive Information			
	DC Orientation Phase 1 - Derivative Classifiers (DCs) / web	Once	1 hr.
	DC Phase II - DCs / live	Once	4 hrs.
	Authorized DC Recertification - DCs / live	36 months	2 hr.
	Protecting UCNI - Users of Unclassified Controlled Nuclear Information (UCNI) / web	Once	1 hr.
Nuclear Material Control And Accountability			
	LANMAS & LAMCAS User - workers doing LANMAS data entry / live	Once	8 hrs.
	MBA Custodian - MBA Custodians / live	Once	2 hrs.
	NM Custodian Refresher - MBA Custodians / web	12 months	2 hrs.
	NM Handler Awareness - NM Handlers / web	24 months	4 hrs.
	NM Physical Inventory - MBA Custodians / web	12 months	1.5 hrs.
	Tamper Indicating Devices (TIO) - TIO Custodian / Users / live	Once	8 hrs.
	TIO Requalification - TIO Custodian / Users / web	24 months	3 hrs.
Physical Security			
X	Escort Responsibilities - Escorts & Vault or Vault Type Room Users, Custodians / web	12 months	30 min.
	Lock & Key Procedure - Key Core Custodians / Alternates / web	12 months	1 hr.
	The Outsider - Vault or Vault Type Room Users (AIS Escorts) / web	Once	1 hr.
	Vault or Vault Type Room Custodian - Vault or Vault Type Room Custodians /	12 months	10 min.

	Course Title - Required For	Frequency	Estimated Time to Complete Training
	web		
	Vault or Vault Type Room User - Vault or Vault Type Room Users / web	12 months	10 min.
	Self-Assessments		
	S&S Self-Assessment Training - Security Subject Matter Experts / web	Once	1 hr.
	Site-Specific Training		
X	Utrain Training Plan 5459 Strategic Computing Complex User	12 Months	1 hr

3.5 Security Stop Work

When any Subcontract worker observes a security related hazard or unmitigated risk, the worker has the authority and responsibility to inform any worker engaged in that work that the work be stopped.

3.6 Reporting Security Incidents

This subsection contains requirements for identifying and reporting known and potential incidents of security concern. Such incidents may involve issues associated with Personally Identifiable Information (PII), ECI, UCNI, classified matter, computer systems, nuclear materials, secure communications, personnel security occurring on-site or off-site; and physical security occurring on LANL property, Laboratory-leased property or SUBCONTRACTOR-owned property. Subcontract workers shall comply with the following requirements.

3.6.1 *Immediately* upon discovery of a potential and/or reasonably suspected incident of security concern, report such concern to the Security Incident Team (SIT) (505-665-3505) or a SPL / DSO; and inform the RLM, and STR/AdSTR. During normal business hours, notifications shall be made only in person or through secure communications (STU or STE) as required below. A non-secure telephone, non-secure fax, non-secure voice mail, or non-secure electronic mail shall not be used to report a potential incident of security concern.

3.6.1.1 The potential compromise of PII shall be reported *immediately* upon discovery to the SIT or SPL / DSO. A potential compromise of PII is considered a serious information security incident because of the possibility of significant adverse consequences to the individual whose data has been compromised.

3.6.1.2 *Immediately* report all security incidents and potential threats and vulnerabilities involving LANL data utilized by the SUBCONTRACTOR to the SIT or SPL / DSO, and then notify the appropriate ISSO or OCSR, RLM and STR/AdSTR.

3.6.1.3 After discovery of any incident involving the loss, compromise, or unauthorized disclosure of classified matter, report the incident *immediately* to the SIT or SPL / DSO, then inform the assigned OCSR, RLM and STR/AdSTR.

3.6.1.4 After discovery of any incident involving the loss, theft, diversion, or unauthorized use of nuclear material, report the incident *immediately* to Material Control & Accountability Group or the SIT or SPL / DSO.

3.6.2 Contact Requirements Outside of Normal Business Hours

For all incidents contact the ADSS duty officer through the Protective Force at 505-665-7708, *immediately* after discovery of a potential incident of security concern. The ADSS on-call duty officer (505-949-0156) may ask to meet with the SUBCONTRACTOR in person so that SUBCONTRACTOR may report such known or potential incidents of security concern, if secure communications are not available.

3.7 Workplace Violence

LANL maintains a work environment that is free from violent behavior and threats of violence. Violent behavior and threats of violence are unacceptable conduct and are prohibited. Any subcontract worker who participates in workplace violence will be barred from the LANL worksite

and their employer shall be notified. Workplace violence is behavior that involves:

- hostile or aggressive physical contact with another person;
- a statement or body gesture that threatens harm to another person; or
- a course of conduct that would cause a reasonable person to believe that they are under threat of harm.

G4.0 Physical Security (Mar 2017)

4.1 Prohibited Articles

Prohibited Articles are those items never permitted on DOE property (e.g. LANL), which includes leased facilities and parking lots. SUBCONTRACTOR shall ensure that prohibited articles are not brought on to DOE property. Introducing an unauthorized prohibited article onto DOE property is a reportable security incident that may result in legal action. Prohibited articles include:

- Dangerous weapons (e.g., guns and knives), explosives, or other instruments or material likely to cause substantial injury or damage to persons or property; includes pocket, hunting or other sharp knives with blades longer than 2.5 inches;
- Non-government-owned firearms;
- Alcoholic beverages, including unopened bottles or cans;
- Controlled substances such as illegal drugs and associated paraphernalia, including medical marijuana but not other prescription medicine; and
- Items prohibited by local, state or federal law.

4.2 Escorting

In addition to any facility-specific escorting requirements, SUBCONTRACTOR shall ensure that all LANL escorting requirements listed below are complied with while in a Security Area (including Property Protection Areas) whether escorting individuals or being escorted by another individual.

An Activity Security Plan (ASP) shall be developed by the LANL host when escorting in PPAs will be outside normal operating hours. SUBCONTRACTOR shall comply with all ASP requirements.

4.2.1 Uncleared foreign nationals are allowed unescorted in publicly-accessible Laboratory property only.

Uncleared foreign nationals are not permitted in Security Areas and only under extraordinary circumstances should an exception be requested. Uncleared foreign nationals may only be escorted into a security area if prior approval has been obtained from DOE/HQ and local security officials. This process takes a minimum of eight (8) weeks.

4.2.2 An Uncleared US citizen Subcontract worker may be authorized for escorted access into a Security Area only if such individual:

- is entering an area to conduct official LANL business that can be accomplished only in a Security Area, or
- has a skill or ability that is required and cannot be provided by another person who has the required clearance (i.e., access authorization) level.

4.2.3 The following Subcontractor workers shall be escorted in a Security Area:

- Uncleared US citizens;
- US citizen visitors who do not have a cleared DOE-standard badge; and
- L-cleared US citizens in a Q-Only Security Area.

4.2.4 All US citizens escorted into a Security Area shall wear one of the following:

- An Uncleared DOE standard badge;
- A LANL Generic Uncleared US Citizen Visitor Badge or;
- A LANL Generic Uncleared US Citizen ESCORT REQUIRED Visitor Badge.

4.2.5 Subcontract Workers who are being escorted shall:

- Provide a valid photo ID;

- State their country of citizenship for their escort before entering a security area;
- Log in, pursuant to the manner required by the LANL owning / tenant organization, before entering a security area or a PPA controlled by an electronic badge reader;
- Physically remain with his or her escort upon entry, during the visit and upon exit of a security area.
- Comply with all requirements outlined by the escort;
- Display a valid badge at all times.

4.2.6 Subcontract Workers serving as escorts have the following responsibilities:

- Complete "Escort Responsibilities" training course prior to escorting individuals;
- Be a US Citizen and possess a valid DOE badge and clearance level for the Security Area being accessed;
- Ensure the Worker being escorted has a valid photo ID prior to issuing any badge;
- Ensure each Worker being escorted is a US citizen through their statement of such status;
- Provide Worker with clear instructions on the rules of behavior and consequences for failure to comply, before granting access to facilities and/or information systems;
- Confirm that each Worker displays their assigned badge whenever in a Security Area;
- Review prohibited and controlled article restrictions with each Worker prior to escorting such Worker;
- Protect classified and unclassified controlled matter, information or discussions from unauthorized access by a Worker;
- Log in each Worker by whatever method is provided at the facility being accessed;
- Notify area occupants of the presence of an Uncleared Worker;
- Maintain control of each Worker at all times;
- Implement any facility-specific escorting requirements as required;
- Immediately notify the Requester/RLM and STR/AdSTR of any incident of security concern;
- Escort each Worker safely to the organization's designated muster area in the case of an emergency evacuation.

4.2.7 An escort shall not escort more than five (5) individuals at any one time, unless otherwise approved by CONTRACTOR in writing.

4.2.8 In cases where an individual without proper security clearance is discovered unescorted in a Security Area, SUBCONTRACTOR workers shall immediately place such individual under escort by an authorized escort and report the situation to the RLM and STR/AdSTR as soon as possible.

4.3 Security Areas

SUBCONTRACTOR shall comply with all requirements for designated Security Areas. In addition, SUBCONTRACTOR shall ensure that all Subcontract workers:

- Have the appropriate clearance (i.e., access authorization) for the Security Area or be properly escorted within the Security Area;
- Adhere to the posted requirements for entering any Security Area (clearance status, badge, access status, training, inspections, controlled articles, prohibited articles, etc.);
- Immediately report physical security and access control discrepancies to the SIT and RLM. Inform the STR/AdSTR. (e.g. breaches of fences or walls or attempts to circumvent security barriers);
- Use a valid badge to enter a Security Area and display the valid badge at all times photo side out, above the waist and in front of the body while in that area;
- Not introduce prohibited articles into Security Areas;
- Obtain authorization before introducing controlled articles into a Security Area;
- Cooperate with Protective Force personnel during badge checks;

- Cooperate with Protective Force personnel during searches of vehicles, persons, and/or hand-carried items being brought into or out of a Security Area;
- Not remove or destroy any door cores or badge readers, unless the SOW in this Subcontract specifically indicates to do so;
- Not duplicate any keys issued;
- Store and protect all keys issued;
- Do not loan an assigned key to another worker without written authorization from the LANL Key Custodian;
- Return all issued keys to the responsible organization Key Custodian when no longer required and inform the RLM and STR/AdSTR of the same;
- *Immediately* report lost or stolen keys in person to the Key Custodian who issued the keys and inform the RLM and STR/AdSTR of the same;
- Adhere to all requirements for escorting individuals who are not authorized to be in a Security Area unescorted. (See Escorting, Section 4.2);
- Do not tailgate, piggyback, or vouch, nor allow another person to do so.

4.4 Acknowledgement / Control of Vehicles On-Site **Not Applicable**

4.5 Enhanced Security Areas

Subcontract Workers authorized to enter a Sensitive Compartmented Information Facility (SCIF), a Special Access Program Facility (SAPF), a certified Vault or Vault Type Room (VTR), a Material Access Area (MAA), a Protected Area (PA), or Limited Area (LA) with Special Administrative Access Controls shall comply with all training and other security requirements as directed by the LANL host organization and identified in the training matrix. These areas have rigid physical security standards and robust access controls that shall be adhered to.

4.6 Security Fences and Barriers **Not Applicable**

4.7 Parking on LANL Premises

4.7.1 Subcontract Workers shall park vehicles in designated parking areas only.

4.7.2 Subcontract Workers shall obey all posted designations and park in a safe and courteous manner.

4.7.3 Failure to park in designated areas and to obey posted signage shall result in a parking violation. Vehicles that are abandoned or present a safety or security concern are subject to removal at the owner's expense.

G5.0 Personnel Security (Dec 2017)

5.1 Substance Abuse

The unauthorized use of alcohol and/or illegal drugs or being under the influence of alcohol and/or illegal drugs is prohibited on the LANL site. LANL's substance abuse policy applies to all who perform work at or for Los Alamos National Laboratory as a subcontract worker, guest scientist, visitor, student or other type of worker as it relates to ensuring a work environment that is free from unauthorized or illegal use, possession or distribution of alcohol or controlled substances.

Drugs currently used in CONTRACTOR'S pre-badging and random testing panel include marijuana, cocaine, opiates, heroine, phencyclidine and amphetamines. A detailed drug testing panel including cutoff concentrations can be found at <http://www.lanl.gov/resources/assets/docs/Exhibit-G/drug-testing-panel-2010.pdf>

The use of medical marijuana is illegal under federal law and therefore is prohibited in accordance with these substance abuse requirements.

SUBCONTRACTOR shall ensure that Subcontract workers comply with all requirements of LANL's Substance Abuse Policy (SAP) which may be accessed electronically at <http://www.lanl.gov/resources/exhibit-g.php>.

For the purposes of this Exhibit, the term manager as used in the SAP means any or all of the following: STR/AdSTR, LANL manager or staff with oversight of this Subcontract, or on-site Subcontract personnel. Subcontractor workers found to be in violation of LANL's SAP may be restricted from working at the Laboratory.

SUBCONTRACTOR shall ensure that all lower-tier subcontractors meet the requirements of this section. Failure at any tier, of a SUBCONTRACTOR to comply with the requirements of this section, shall be grounds for the CONTRACTOR to bar the worker of a SUBCONTRACTOR at any tier from work on DOE/LANL property or on the subcontract.

5.1.1 Subcontract Workers shall:

- Be fit for duty and avoid behavior that compromises the health or safety of others or the security of the Lab;
- Notify Personnel Security, the RLM, STR/AdSTR and CA/PS immediately if cited, arrested or convicted of any drug or alcohol statute violation;
- Notify Personnel Security, the RLM, STR/AdSTR and CA/PS immediately if they are cited, arrested or convicted of any alcohol-related incident such as (e.g.) DUI, DWI, public intoxication, open container, minor in possession;
- Notify Personnel Security, the RLM, STR/AdSTR, and CA/PS immediately after any initiation of treatment for any drug or alcohol-related disorder (only required of workers with security clearances);
- Meet with Personnel Security or Occupational Medicine promptly when asked to perform a drug and/or alcohol test and fully cooperate with their instructions;
- Provide true and accurate records relating to their use of drugs and alcohol;
- Immediately report accidental ingestion of illegal drugs to Personnel Security, the RLM, and STR/AdSTR so the appropriate action can be taken.

5.1.2 Pre-badging Drug Testing

Subcontract workers who will obtain a standard (non-Visitor) badge such as a DOE Q, L, Un-cleared; Un-cleared Site-specific LANL; or Cleared/Un-cleared Foreign National badge, shall successfully pass a drug test no more than 60 days before obtaining a standard (non-Visitor) badge.

Subcontract workers who currently hold a standard badge but have not completed a pre-badge drug test, are required to complete the pre-badge drug test prior to working on a TRIAD subcontract for the first time.

Subcontract workers who currently hold a standard badge and transfer from one TRIAD subcontract to another without a break in service between subcontracts, are not required to complete a second pre-badge drug test.

Subcontract workers who hold a standard badge and experience a break in service for five (5) or more business days between TRIAD subcontracts are required to successfully pass a drug test no more than 60 days before re-obtaining a standard badge.

Subcontract workers shall not begin work on this subcontract until a pre-badging drug test is completed and passed, if applicable. The testing will be coordinated and paid for by SUBCONTRACTOR.

A drug testing laboratory used for any TRIAD required drug test shall be certified by the Department of Health and Human Services under the National Laboratory Certification Program. A current list of approved drug testing laboratories is published in the Federal Register which can be found at: <https://www.samhsa.gov/workplace/resources/drug-testing/certified-lab-list>

SUBCONTRACTOR shall provide records of pre-badging drug screening to CONTRACTOR upon request.

5.1.3 Random Drug Testing

All Subcontract workers who are issued standard non-Visitor badges from the LANL Badge Office, which include Q, L or Un-cleared badges, are subject to random drug testing while on the LANL site.

Subcontract workers who are subject to random drug testing under another government testing program will not be included in LANL's random testing pool.

5.1.4 Reasonable Suspicion Drug and/or Alcohol Testing

5.1.4.1 When conducting reasonable suspicion testing, CONTRACTOR may test for any drug.

5.1.4.2 Drug and/or Alcohol testing will be required if:

- A Subcontract worker is reasonably suspected of being impaired by either drugs or alcohol.
- LANL Personnel Security, Occupational Medicine or LANL manager or supervisor determines that there is reasonable suspicion that the subcontract worker may have violated this procedure.
- The subcontract worker is the subject of a drug-detection dog alert and/or possesses property that has caused a drug-detection dog alert.
- A LANL manager or supervisor observes worker behavior commonly associated with alcohol or substance abuse such as unexplained chronic tiredness, tardiness, absence patterns, odor of alcohol, slurred speech, unsteady gait, etc. The manager or supervisor shall discuss the observed behavior with the worker as appropriate and make a referral to LANL Occupational Medicine for an evaluation of the worker.

5.1.4.3 Drug and/or alcohol testing may be required if:

- An incident or accident results in a serious injury or had the potential for serious injury occurs at work.
- LANL Occupational Medicine determines that unannounced, periodic testing is medically appropriate as indicated within the context of *Fitness for Duty* or *Human Reliability Program* monitoring.
- It is related to security clearances or applications for security clearances.
- When conducting occurrence testing, CONTRACTOR may test for any drug.

5.1.5 Other Testing

Drug and/or alcohol testing shall be required if:

- A non-vehicular incident or accident occurs at work that results in a serious injury or had the potential for serious injury.
- A vehicle accident that results in or had the potential for injury while driving any government-owned vehicle (including motorized equipment) on or off Laboratory property; or while driving any private vehicle (including rental vehicles) within the boundaries of a Laboratory Technical Area (other than downtown Los Alamos). [Note: Personnel Security will determine whether to require testing under these circumstances]
- It is necessary when related to security clearances or applications for security clearances.

5.1.6 Testing Conduct

CONTRACTOR'S Personnel Security organization has oversight of all drug and alcohol testing on-site at LANL for random, reasonable suspicion and other testing. All drug collections and alcohol testing are conducted in accordance with 49 CFR Part 40 and 10 CFR Part 707. All testing (except pre-badging drug testing) will be conducted and paid for by the CONTRACTOR.

5.1.7 Confirmed Positive Drug and/or Alcohol Test

The Requester or STR/AdSTR and LANL manager shall take the following actions if a Subcontract worker has a confirmed positive drug test:

- Immediately stop the worker from performing any additional work on site;
- Immediately notify Subcontract worker's management that the worker's badge is being pulled;
- Ask the worker to report back to his/her employer because his/her assignment is being terminated when a drug test is confirmed positive;

- Ask the worker to call a relative or friend to take him/her home when an alcohol test is confirmed positive;
- Confiscate the worker's badge and return it to Personnel Security;
- Consult with OM-MS to determine whether the worker should have a medical evaluation prior to driving;
- If alcohol related, instruct worker to report to OM-MS the next work day, prior to performing any work duties, for a Fitness for Duty evaluation unless the assignment is terminated.
- Coordinate with the CA/PS to ensure proper notifications are made regarding test results and any changes to the subcontract worker's assignment.

5.1.8 Failure to Show or Refusal of Drug and/or Alcohol Test

- If a Subcontract worker fails to show up for a test after being contacted, such failure shall be treated in the same manner as a confirmed positive.
- If a Subcontract worker refuses to be tested, such refusal shall be reported and treated as a confirmed positive.
- Failure to cooperate and submit to a drug/alcohol test shall be grounds for the CONTRACTOR to bar the worker from the LANL site and work on the subcontract.

5.1.9 Drug Detection Dogs may be used:

- On all Laboratory property (DOE-owned, leased or rented property for LANL) including, but not limited to parking lots.
- In and around worker's privately-owned vehicles parked on Laboratory property.
- In and around work areas.
- In and around desks, lockers and other containers assigned to workers.

5.1.9.1 If illegal drugs are found on a Subcontract worker's person by using drug-detection dogs, the Requester or STR/AdSTR and LANL manager shall take action as outlined in Subsection 5.1.6.

5.1.9.2 If illegal drugs are not found, but the drug-detection dogs alert to the scent of illegal drugs in private property owned by a worker or in a work area, desk, locker or other container assigned to a certain employee and no illegal drugs are actually found, the LANL Physical Security Team shall notify the subcontract worker's LANL manager of a drug-detection dog alert. Additional action may be taken if behavior is observed by the LANL manager that may pose an immediate threat to the health and safety of the worker or others or a potential threat to security.

5.1.10 Off-site Behavior

The unlawful manufacture, distribution, dispensing, possession, use, transfer or sale of controlled substances is prohibited regardless of whether this occurs at the workplace, on Laboratory business, or on an individual's private time or property. These and other violations of this substance abuse policy are considered connected to work with or at LANL and may result in the termination of a Subcontract worker's permission to work on DOE / LANL property or on the subcontract, regardless of whether or not the misconduct occurs during work hours or on Laboratory premises.

5.2 Badges

SUBCONTRACTOR shall ensure compliance with the badge requirements outlined in the following subsections. Any individual performing work under this subcontract shall obtain a DOE or LANL badge. (Subcontract workers, Guests and Affiliates)

All badges issued by the LANL Badge Office are accountable. Therefore, SUBCONTRACTOR shall ensure that every badge issued under this subcontract is returned to the LANL Badge Office. SUBCONTRACTOR shall also timely report any lost or stolen badges to the LANL Badge Office. Failure to return DOE security and site-specific (LANL) badges will result in denial of future badging services to the badge holder.

5.2.1 General Badging Requirements

- 5.2.1.1 A Subcontract Worker who is submitted for a standard DOE-Cleared or Uncleared badge or a LANL-Only Site-specific badge shall provide Real ID approved proof of U.S. citizenship to the LANL Badge Office at the time of badging. The foregoing applies regardless of the length of time that a Subcontract Worker will be on site.
- 5.2.1.2 Proof of citizenship includes an original photo identification card, such as a current and valid state driver's license and an original of one of the following five documents:
- For a Subcontract worker born in the U.S., a birth certificate filed for record shortly after birth and certified with the registrar's signature is required. A delayed birth certificate (one created when a record was filed more than one year after the date of birth) is acceptable if it shows that the report of birth was supported by acceptable secondary evidence of birth. All documents submitted as evidence shall be original or certified.
 - For a Subcontract worker claiming citizenship by naturalization, a certificate of naturalization showing the individual's name is required.
 - For a Subcontract worker claiming citizenship acquired by birth abroad to a US citizen, one of the following (showing the worker's name) is required: Certificate of Citizenship issued by the Immigration and Naturalization Service; Consular Report of Birth Abroad of a Citizen of the United States of America (Form FS240); or Certificate of Birth (Form FS 545 or OS 1350).
 - A US passport, current or expired; an expired passport is an acceptable proof of citizenship for badging purposes only.
 - A record of Military Processing-Armed Forces of the US (DD Form 1966) provided it reflects that the worker is a US citizen.
- 5.2.1.3 A Subcontract Worker who is a US citizen, does not currently hold a DOE badge and meets applicable requirements, shall be issued a DOE Uncleared badge or LANL-Only Site-specific badge.
- 5.2.1.4 A Subcontract Worker who is either a Cleared or an Uncleared foreign national shall be badged in accordance with current DOE and LANL policies. The Subcontract worker shall wear a photo badge whenever on DOE property (i.e. LANL) or LANL-leased premises.
- 5.2.1.5 Individuals who falsely certify their citizenship will be removed from the Laboratory and will be denied future access to LANL. This will be reported to the appropriate LANL organizations for investigation and other external organizations as necessary.

5.2.2 Obtaining a Badge

5.2.2.1 Worker (US Citizen) Requirements

- A Subcontract worker shall obtain either a DOE or a LANL badge before performing any work at LANL.
- A Subcontract worker shall present identification as required by the Badge Office before being issued a badge.

5.2.2.2 Official Visitor (US Citizen) Requirements

- An Official Visitor shall obtain a badge in accordance with this document;
- An Official Visitor shall wear a badge issued by the LANL Badge Office whenever on Laboratory Property;
- Uncleared Official Visitors will be required to sign a "Statement of U.S. Citizenship" form at the LANL Badge Office affirming their U.S. citizenship;
- Uncleared Official Visitors shall receive a briefing that covers safety and security requirements relevant to the work they will be performing;
- Uncleared Official Visitors who falsely certify their citizenship will be removed from the Laboratory and will be denied future access to LANL. This breach will also be reported to the appropriate LANL organizations.

5.2.2.3 Cleared Foreign National (Worker or Official Visitor) Requirements

A cleared foreign national, in conjunction with his or her Laboratory Host, shall contact the LANL Personnel Security Office to receive a cleared foreign national badge.

5.2.2.4 Uncleared Foreign National (Worker or Official Visitor) Requirements

An Uncleared foreign national, in conjunction with his or her Laboratory Host, shall contact the Foreign Visits & Assignment Team before performing work or other activities at LANL; and contact the LANL Personnel Security Office to receive an Uncleared foreign national badge.

5.2.3 Subcontract Workers shall:

- Complete training required by Personnel Security before receiving a badge (see Section 3.4.2 for training details);
- Wear the badge, photo-side out, above the waist, on the front side of the body, at all times while on DOE-owned property (i.e., LANL) or on CONTRACTOR leased or rented premises;
- Remove the badge and protect it from public view when leaving DOE-owned property or CONTRACTOR leased or rented premises;
- Present the badge whenever requested by Protective Force personnel, LANL host, or the Personnel Security Group;
- Not allow other individuals to use their badge under any circumstances;
- Minimize the number of instances of temporary badge issuance and replacement of lost badges;
- Ensure the badge is never photocopied;
- Return an issued badge to the Badge Office (via the RLM or STR/AdSTR as appropriate) following termination of employment, badge expiration, end of assignment, or completion of a visit. Subcontract Workers are not permitted to retain badges for any reason.
- Failure to return DOE security and LANL site-specific badges will result in denial of future badging services to the badge holder.

5.2.4 Badge Expiration Dates

5.2.4.1 Badges may be issued for the term of the subcontract. However, a SUBCONTRACTOR shall only request a badge for the period of time in which a Subcontract Worker will be utilized on this subcontract.

5.2.4.2 SUBCONTRACTOR shall abide by the following end date requirements:

- When a Subcontract Worker is working multiple subcontracts all outside of Security Areas, the earliest end date among the subcontracts will be the badge end date.
- When a Subcontract Worker holds a clearance (i.e., access authorization) under multiple subcontracts, the badge end date is based on the subcontract that is designated as the "primary" subcontract.
- When a Subcontract Worker holding a clearance (i.e., access authorization) is performing work under multiple subcontracts held by a Subcontractor that has received a favorable FOCI determination, the earliest end-date among those subcontracts is used. A new badge will need to be requested if there is any work to be performed that extends beyond the earliest end-date within a Security Area.

5.2.4.3 If a subcontract is going to be extended, SUBCONTRACTOR shall renew a Subcontract Worker's badge within 30 days prior to its expiration.

5.2.5 Lost or Stolen Badge(s)

5.2.5.1 Lost or stolen badges shall be reported to the Badge Office within 24 hours or the next business day after discovery of the loss, whichever is soonest. The RLM or STR/AdSTR shall also be notified. The individual badge holder shall go to the

LANL Badge Office and complete a written affidavit (Form 1672) *Notification of Permanent Inactivation of Badge* in order to obtain a replacement badge.

- 5.2.5.2 In addition to 5.2.5.1, if a badge is stolen, the individual badge holder shall report the theft to the Security Incident Team (SIT) and inform the STR/AdSTR or CNPS by the next business day of discovery of the loss.

5.3 Clearances (i.e., access authorizations)

SUBCONTRACTOR shall follow all clearance requirements outlined below and shall not permit any individual to have access to classified information; except when access to classified information is determined by proper clearance and the need-to-know.

The requirements for securing eligible personnel and proper personnel security clearances (i.e., access authorizations) for "L" and "Q" work and for complying with other security regulations and procedures shall not be considered cause for an extension of time for performance of the subcontract work or for extra payments under the subcontract. However, the cost of processing DOE "Q" or "L" access authorizations will be borne by the Government.

5.3.1 Requesting an Initial Clearance

SUBCONTRACTOR shall ensure that Subcontract Workers:

- Provide information required to request a clearance, including, but not limited to, proof of citizenship, Personal Identification Verification (PIV) documents, fingerprints, residence, work, education, military history, and personal references, as well as specific information regarding any legal, financial, mental health or loyalty issues;
- Have had a complete a background investigation and testing for illegal drugs;
- Verify the Subcontract Worker's record is active in the system, correct and complete through the RLM or STR/AdSTR, including employer and subcontract number and that the worker is working on a FOCI approved contract;
- Complete a *Clearance Request/Recertification/Suitability Form* (DOE F 472.1C) signed by a LANL RLM.
- Complete an online (e-QIP) *Questionnaire for National Security Positions QNSP* (SF86) and attendant clearance documents when requested by the Personnel Security Office.
- Meet with Clearance Processing Security Specialist and/or provide written responses to additional requests for information from Clearance Processing.

5.3.2 Clearance Processing Critical Reporting Elements

SUBCONTRACTOR shall ensure that subcontract workers holding a cleared DOE-standard badge, report any of the following events to Clearance Processing, the RLM and STR/AdSTR within **one (1)** working day of the occurrence unless otherwise stated:

- All arrests, criminal charges (including charges that are dismissed) or detentions by Federal, state, or other law enforcement authorities for violations of the law (other than traffic violations for which only a fine of \$300 or less was imposed), within or outside of the US, unless the traffic violations were drug or alcohol related;
- Personal or business-related filing for bankruptcy;
- Garnishment of wages;
- Legal action effected for name change;
- Change in citizenship;
- Employment by, representation of, or other business-related association with a foreign or foreign-owned interest or foreign national;
- Any hospitalization for mental illness; treatment of drug abuse; or treatment for alcohol abuse;
- Approach or contact by any individual seeking unauthorized access to classified information or matter or SNM. If such an approach or contact is made while on foreign travel, workers should notify a Department of State official at the local US Embassy or Consulate;
- Termination of employment - also notify the RLM and STR/AdSTR;

- Change in duties resulting in a clearance no longer being required;
- Leave of absence or extended leave not requiring access to classified information or matter, or SNM for 90 consecutive working days;
- Leave for foreign travel, employment, assignment, education, or residence for more than three months, not involving official US Government business even if employment continues with the subcontractor.

5.3.3 Security Termination Requirements for Departing Subcontract Workers

Cleared Subcontract workers who are terminating work under a TRIAD Subcontract at the Laboratory for any reason shall meet all the federal and local requirements for departing workers.

Subcontract workers shall complete all clearance-related departure requirements. Some termination procedures are mandated by federal law. Failing to comply with the requirements can hinder or prevent a worker's future efforts to obtain a security clearance or badging services at LANL. Failure of a Cleared worker to follow proper termination procedures is also reported to NNSA/DOE by LANL Personnel Security.

Clearance-related requirements for departing Subcontract workers include the following:

- **Termination Briefing** - the Subcontract worker shall attend a termination briefing conducted by LANL Personnel Security or SUBCONTRACTOR management; and submit a completed TRIAD LLC *Safeguards and Security Clearance Termination Briefing Form* to Personnel Security.
- **Security Termination Statement** - the Subcontract worker shall sign and submit a *Security Termination Statement* DOE Form 5631.29 to LANL Personnel Security.
- **Surrender DOE Access Credentials** - the Subcontract Worker shall surrender his or her security badge to the LANL Badge Office, while coordinating with the RLM and STR/AdSTR.

For each event listed below, the required action shall be carried out within **two (2) working days** of the Event described in the first column of the table.

Event	Do Termination Briefing & Form, and Submit DOE Form 5631.29	Return These Badges
Subcontract Worker's employment terminated	Individual Subcontract Worker	Subcontract Worker's badge, whether Cleared or Uncleared, including expired
Subcontract Worker transferred from subcontract	Individual Subcontract Worker	Subcontract Worker's badge, whether Cleared or Uncleared, including expired
Clearance no longer required	All Subcontract Workers	All Cleared "L" or "Q" badges, including expired
Subcontractor's FOCI approval withdrawn or terminated	All Subcontract Workers	All Cleared "L" or "Q" badges, including expired
Subcontract completed or terminated	All Subcontract Workers	All badges, whether Cleared or Uncleared, including expired

- SUBCONTRACTOR shall ensure that any Subcontract Worker who holds a clearance and is no longer working on this subcontract, follows the security clearance termination process outlined above.
- SUBCONTRACTOR shall notify Personnel Security, the RLM, STR/AdSTR and CNPS of any Event that changes the status of a worker's need for a badge.

5.3.4 Clearance Renewals or Reinvestigations

SUBCONTRACTOR shall ensure that a Subcontract Worker whose clearance is being renewed or reinvestigated:

- Completes the reinvestigation e-QIP package every 5 years for Q clearance holders or every 10 years for L clearance holders.

- Completes the LANL Annual Security Refresher Training before the effective date of the training expiring and access is therefore denied.

5.4 Foreign Ownership, Control or Influence (FOCI)

FOCI determinations are required for a SUBCONTRACTOR, its owners, and lower-tier subcontractors, if a subcontract requires Q or L-cleared access authorizations. Before a Subcontract Worker may be Q or L-cleared, his/her company shall undergo a FOCI certification. A separate FOCI determination is required for a prime subcontractor and any lower-tier subcontractor.

SUBCONTRACTOR'S Key Management Personnel shall have an active clearance or a clearance request in process before a favorable FOCI determination can be returned. As a part of the FOCI determination process, SUBCONTRACTOR'S Facility Security Officer (FSO) and any additional workers with security responsibilities shall complete the self-study course indicated under Section 3.4.2.

SUBCONTRACTOR shall submit their FOCI packages / information online at this website: <https://foci.anl.gov/>. A favorable FOCI determination shall be rendered prior to LANL granting a facility clearance requiring access authorizations. Questions related to FOCI should be addressed through the RLM or STR/AdSTR to the Personnel Security POC.

5.4.1 SUBCONTRACTOR shall ensure that the following notifications are immediately provided to the Personnel Security POC and the RLM or STR/AdSTR.

- Written notification of a change in the extent and nature of FOCI that affects the information in the FOCI determination;
- Immediately provide written notification and supporting documentation relevant to changes that would affect the information in a subcontractor's or any tier parents' most recent DOE FOCI submission(s).

5.4.2 SUBCONTRACTOR shall complete and submit a new FOCI package at least every five years or at the request of CONTRACTOR, to the Personnel Security POC.

5.4.3 SUBCONTRACTOR shall certify annually to the Personnel Security POC and inform the RLM or STR/AdSTR and the CA/PS that:

- No significant changes have occurred in the extent and nature of FOCI that would affect the answers to the questions provided in it's FOCI representations;
- No changes have occurred in the organization's ownership;
- No changes have occurred in the organization's officers, directors, and executive personnel.

5.4.4 CONTRACTOR may terminate this subcontract for default if SUBCONTRACTOR either fails to meet obligations imposed by this section, or creates a FOCI situation in order to avoid performance or a termination for default. CONTRACTOR may terminate this subcontract for convenience if SUBCONTRACTOR becomes subject to FOCI and for reasons other than avoidance of performance of the subcontract, cannot, or chooses not to avoid or mitigate the FOCI problem.

5.5 Human Reliability Program **Not Applicable**

5.6 Foreign Visits and Assignments **Not Applicable**

G6.0 Information Security (Dec 2017)

Subcontract Workers shall not disclose LANL data collected, created, processed, transmitted, stored or disseminated by SUBCONTRACTOR in performance of this subcontract, unless each case of such disclosure is specifically approved by the LANL Data Owner and the CA/PS.

Subcontract Workers shall ensure LANL data utilized in the performance of this subcontract is not used for any other purpose that has not been specifically approved by the LANL Data Owner.

6.1 Official Use Only (OUO) and TRIAD Proprietary (LPI) Information

OUO and LPI information is unclassified with the potential to damage government, commercial or private interests if disseminated to persons who do not have a need-to-know the information to perform their jobs or other DOE-authorized activities. LPI includes any information relating to the

business, operations and programs of LANL not generally known by persons not employed at LANL.

Personal Identifiable Information (PII) is a type of OUO. PII is any information collected or maintained by DOE or CONTRACTOR about an individual, including but not limited to education, medical history, financial transactions and employment history; and information that can be used to distinguish an individual's identity.

SUBCONTRACTOR shall protect OUO and LPI information from unauthorized dissemination (e.g. to persons who do not require the information to perform work under this subcontract) and shall follow all requirements for OUO and LPI documents specified below.

6.1.1 Access

No security clearance is required for access to OUO or LPI. Access to OUO and LPI information shall only be provided to those persons who have a need to know.

If OUO information is Export Control Information (ECI) access is restricted to US persons, defined as citizens and Lawful Permanent Residents. Access to ECI (including parts, tools, material and equipment fabricated from ECI specifications and drawings) by non-Permanent Resident Alien foreign nationals is prohibited.

If OUO information is Applied Technology (AT) it is subject to access restrictions established by the DOE Program Office. The associated LANL program manager can determine access authorizations for Laboratory workers.

6.1.2 Storing

OUO and LPI information shall be stored in a locked room or locked receptacle (e.g. desk, file cabinet, safe). OUO and LPI information stored on a computer shall meet all LANL password, authentication, encryption, or file access control requirements to protect the files from unauthorized access.

6.1.3 Reproduction

All copies of LANL OUO and LPI (including 3-D print prototypes) must be protected, accessed, stored, marked, transmitted and destroyed in the same manner as the originals.

6.1.4 Transmitting

E-mail messages that contain OUO or LPI information shall indicate OUO or LPI in the first line, before the body of the text. OUO or LPI disseminated over networks outside of LANL should be encrypted with NIST-validated encryption software (e.g., Entrust®).

PII information that is disseminated over networks outside of LANL shall be encrypted with NIST-validated encryption software

In the case of hard copies being sent outside of LANL OUO or LPI shall be placed in a sealed, opaque envelope marked with the recipient's name, a return address and the words "To Be Opened by Addressee Only". For interoffice mail within LANL, OUO or LPI shall be placed in a sealed, opaque envelope with the recipient's address and the words "To be Opened by Addressee Only" on the front of the envelope.

6.1.5 Destroying

Users are not required to destroy electronic media that contains OUO or LPI. However, disks should be overwritten using approved software before they are thrown away. Hard copy OUO or LPI documentation shall be destroyed by using an approved shredder (strips no more than 1/4 inch wide).

6.1.6 Export Controlled Information Restrictions

The work to be performed under this subcontract includes LANL technical data; the export of which is restricted by the Arms Export Control Act (22 U.S.C. §2751, et seq.), the Atomic Energy Act of 1954, as amended (42 U.S.C. §2011) or the Export Administration Act of 1979, as amended (50 U.S.C. §2401, et seq.). Violations of these laws may result in severe administrative, civil, or criminal penalties. Further dissemination must be pre-approved by Los Alamos National Laboratory.

6.2 Unclassified Controlled Nuclear Information (UCNI) Not Applicable

6.3 Classified Matter and Material

Disclosure of any classified information relating to the work or services hereunder to any person not entitled to receive it, or failure to safeguard any classified information, may subject the SUBCONTRACTOR, its agents, employees or lower-tier subcontractors to criminal liability under the laws of the United States (i.e., Atomic Energy Act of 1954, as amended, 42 U.S.C 2001 et seq.; 18 U.S.C. 793 and 794; and Executive Order 12958).

6.3.1 General Responsibilities

6.3.1.1 SUBCONTRACTOR shall ensure compliance with all requirements for accessing, storing, generating, marking, reproducing, receiving, transmitting, and accounting for classified matter documents and materials.

6.3.1.2 SUBCONTRACTOR shall employ need-to-know controls, safeguard all classified information and protect against sabotage, espionage, loss or theft of the classified documents and material in SUBCONTRACTOR'S possession in connection with the performance of work under this subcontract.

6.3.1.3 Except as otherwise expressly provided in this subcontract, SUBCONTRACTOR shall, upon completion or termination of this subcontract, transmit to CONTRACTOR all classified matter in the possession of all Subcontract Workers.

6.3.2 Classified Matter Responsibilities

Subcontract Workers shall:

- Complete required CMPC training, before receiving access to classified matter;
- Protect classified matter from unauthorized physical, visual or aural access;
- Ensure classified matter in use shall be constantly attended by, or under the control of, a person possessing the proper access authorization and need-to-know.
- Conduct classified discussions and classified work only in Security Areas;
- Conduct classified discussions or classified work that involves Top Secret (TS) information only in a Security Area specifically approved for TS;
- Discuss, release, or transmit Classified Matter only to those individuals possessing the required clearance and need-to-know;
- Ensure that Classified Matter is attended or stored in an approved security container;
- Ensure when classified information is discussed, ensure that the classification level and category and any applicable caveats are stated before the discussion begins.
- Immediately report any issues concerning missing classified matter, emergency situations, controlling or transmitting classified matter to the SIT, DSO or SPL and LANL RLM.

6.3.3 Determining Need-to-Know

Any Subcontract Worker who has been granted access to classified matter shall determine another worker's clearance and need-to-know before granting access to that matter. Need-to-know shall be established by:

- determining what matter will be accessed; and
- determining whether the recipient requires access to this matter to perform his / her official duties through current relationships, tasks, duties and assignments or confirmation by a LANL RLM.

6.3.4 Clearance requirements for access to classified matter:

Category & Level of Classified Matter	Q Cleared	L Cleared
Confidential National Security Information	Permitted	Permitted
Confidential Formerly Restricted Data	Permitted	Permitted
Confidential Restricted Data	Permitted	Permitted
Secret National Security Information	Permitted	Permitted

Category	Level of Classified Matter	Q Cleared	ICleared
Secret	Formerly Restricted Data	Permitted	Permitted
Secret	Restricted Data	Permitted	Excluded
Top Secret	National Security Information	Permitted	Excluded
Top Secret	Formerly Restricted Data	Permitted	Excluded
Top Secret	Restricted Data	Permitted	Excluded
Sigmas 14 & 15 granted by UCSC or alternate			

6.3.5 Training Requirements for Classified Matter Users

All Subcontract Workers who access, generate, handle, store or process classified matter shall take the following training: (See Section 3.4.2 for details)

Course Title	Frequency
Classified Matter Protection	Once
CMPC User Refresher Training	24 months

Specific training is required for any Subcontract worker who will be working with Sigma 14, 15 or 20 classified matter. These workers shall take the following training as it applies to their job duties within the scope of work: (See Section 3.4.2 for details)

Course Title	Frequency
Sigma 14 Awareness	12 months
Sigma 15 Awareness	12 months
Sigma 20 Awareness	12 months

6.3.6 Marking Classified Matter

Properly marking classified matter is complicated and situation specific. If a Subcontract Worker is going to be working with classified documents, the RLM or STR/AdSTR shall arrange for the Subcontract Worker to take the appropriate training in this area.

6.3.7 Storing Classified Matter

When storing Classified Matter, Subcontract Workers shall:

- Store classified matter that is not in use in an approved security container.
- Return all classified matter to the LANL RLM or other authorized personnel if a Subcontract Worker will be on leave for more than 90 days, no longer needs to use the classified matter, or terminates employment.
- Protect Classified Matter that is pending Derivative Classifier review at the highest potential or possible classification level and category.
- Ensure combinations on containers on LANL property are changed as required.
- Secure security containers before leaving such containers unattended.
- Perform end-of-day checks to ensure proper storage of Classified Matter.

6.3.8 Requirements for Storage of Classified Matter

6.3.8.1 Secret and Confidential matter shall be stored in: a locked GSA-approved safe within a Security Area; or in a certified Vault or Vault Type Room within a Security Area.

6.3.8.2 Top Secret (TS) matter shall be stored in: a locked GSA-approved safe in a Security Area with supplemental controls approved by the Physical Security Team; or in a certified Vault or Vault Type Room approved for TS by the Physical Security Team.

6.3.9 Receiving or Transmitting Classified Matter

6.3.9.1 Classified mail shall be delivered to a primary or alternate CMC at the designated classified mail stop with the inner envelope unopened. All incoming classified mail shall be examined for evidence of tampering, incorrect addressing, improper marking, improper transmission and incorrect packaging.

6.3.9.2 Prior to sending classified matter, Subcontract workers shall verify the intended recipient's clearance or access authorization, any required program or special access approvals, need-to-know for the matter being transmitted, and approved

classified mail address. Workers shall ensure the classified matter is marked in accordance with LANL procedures (CMPC Handbook).

6.3.10 Destroying Classified Matter

6.3.10.1 Subcontract Workers shall destroy unneeded (e.g. multiple copies) or obsolete classified matter and classified was as soon as practical. Classified matter covered by any current moratoriums or court orders shall not be destroyed. Record copies of documents, whether electronic or paper-based shall only be destroyed in accordance with established Laboratory records retention requirements and procedures.

6.3.10.2 Classified matter shall be destroyed using only approved destruction equipment located within a Limited Area or higher. Classified matter shall be destroyed beyond recognition to prevent reconstruction. Acceptable methods for destroying classified matter include shredding, pulping, melting, mutilation, chemical decomposition, or pulverizing.

6.3.11 Classified Scanning

6.3.11.1 SUBCONTRACTOR shall comply with enhanced security requirements for document scanning activities to prevent compromising classified information. Scanners include secure copiers connected to secure networks, secure copiers connected to secure desktop systems, secure scanners connected to automated information systems, and secure multi-function scanners.

6.3.11.2 System Accreditation

All classified equipment shall be accredited before processing classified information. The LANL Cyber Security Office shall approve the use of all non-government owned equipment prior to processing classified information.

6.3.11.3 Operator Training

Secure scanner operators shall complete all required training including:

- Annual Security Refresher Training
- Classified Matter Protection
- Computer Security Annual Refresher
- Classified Computer Security Briefing
- Sigma 15 training, if applicable
- Read Section 3.4 "Reproducing Classified Matter" and Attachment A "Rules of Use and Operating Instructions" in the Classified Matter Protection and Control Handbook, P204-2.

G7.0 Controlled Portable Electronic Devices /Wireless Technology (Mar 2017)

LANL's level of control on wireless computing devices and on other controlled portable articles depends on the type of device, who owns it (Government or non-Government), where it will be located and how it will be used. Microphone, camera, storage and transmit/wireless capabilities restrict where a device may be carried or used without additional approval/authorization.

7.1 Controlled Portable Electronic Devices (PEDs)

Controlled PEDs are easily portable, stand-alone devices that can store, read, write, record or transmit data or information. Certain controlled PEDs can read and/or write nonvolatile information and plug into a computer. They are not stand-alone devices like other types of controlled PEDs.

Controlled PEDs are not permitted in Security Areas without prior authorization.

SUBCONTRACTOR shall ensure that controlled PEDs are not brought into a Security Area without prior written approval from the Cyber Information Security Office with concurrence by the RLM or STR/AdSTR. Additional LANL site-specific requirements may exist and shall be followed as appropriate.

Controlled PEDs include:

- Cell phones, smart phones, cordless phones, Blackberry devices, two-way pagers, two-way radios;
- Smart watch, fitness trackers with Bluetooth, USB or other connect/transmit capabilities;
- Recording equipment (audio, video, optical, or data);
- Copiers or scanners with hard drives;
- Radio frequency (RF) transmitting equipment (including ankle monitoring devices), Infrared (IR) or other wireless transmission capabilities;
- Electronic equipment with a data exchange port capable of being connected to automatic information system equipment;
- Portable computers, including but not limited to: laptops, tablet computers, personal digital assistant (PDAs), palm-top computers, Blackberry devices, Notebooks, iPhones or iPads and watches;
- Portable electronic reading, web-browsing and data collection devices with WiFi or USB connectivity, including but not limited to: Kindles, iPads, Nextbook Tablets, Nook eReaders, Sony Digital Readers or iPods;
- Any device with a capability to connect to computers or use wireless communications;
- All types of Cameras - video, still, digital, film, tablet computers or in cell phones. If the use of cameras - either inside or outside of a Security Area is deemed mission essential - then use of cameras shall be authorized via coordination with the STR/AdSTR, the RLM and the Physical Security Team prior to the use of such cameras. *(Form 1897PA)* A Subcontract worker using a non-government owned camera on Laboratory property shall possess a valid DOE/LANL badge.
- CD / DVD write drives
- External hard drives
- Flash memory (i.e. PC cards, SD memory cards)
- USB memory devices (i.e. thumb drives, memory sticks, jump drives)

7.2 Approvals Required Before Commencement of Work

- 7.2.1 Prior to the introduction of any controlled PEOs into a Limited Area or connected to a LANL-owned system, approval shall be obtained from the Cyber Information Security Office. The RLM or STR/AdSTR shall also be informed.
- 7.2.2 Prior to any wireless operation on wireless projects (unclassified or classified) approval shall be obtained from LANL's Cyber Information Security Office. The RLM or STR/AdSTR shall also be informed. Violations of this requirement may constitute a security infraction, and may result in administrative actions up to and including exclusion of a Subcontract Worker from LANL and/or from working on this subcontract.
- 7.2.3 Subcontractors using wireless technology, including construction sites, need to obtain certification and approval from the Cyber Information Security Office prior to engaging wireless technology. A LANL "Wireless System Security Plan" may also be required.

7.3 Rules for Using Authorized Controlled PEDs in Security Areas

Authorized controlled PEDs with audio recording or data transmitting capabilities in Security Areas shall be turned off (for UCNi), batteries removed (for classified) or placed in an approved Radio Frequency container whenever:

- A classified or UCNi discussion or phone call is taking place within audible range;
- Classified or UCNi computer processing is taking place in the immediate area of the device;
- Classified or UCNi faxing is taking place within the immediate area of the device; and
- Classified or UCNi copying is taking place on a digital copier in the immediate area of the device.

It is the responsibility of subcontract workers to be cognizant of classified or UCNi activities that may be occurring in adjacent work areas. Workers shall confirm that no classified or UCNi activities are taking place in the immediate vicinity prior to using the authorized controlled article.

7.4 Wireless Device Requirements

- 7.4.1 The use of devices with wireless connectivity such as computing, cellular and printing devices with "Bluetooth" technology, or wireless networking protocol is prohibited anywhere at LANL, including all LANL property and leased space except for certain defined areas. Wireless devices cannot be connected to LANL computing assets or networks. Such capabilities shall be disabled unless the activity has been approved by the LANL Cyber Information Security Office. It is the user's responsibility to know what devices they possess, the capabilities of those devices and to ensure that wireless capabilities have been disabled.
- 7.4.2 The use of wireless networking, Bluetooth and cell phone technologies is allowed in public areas of the Bradbury Science Museum, the Otowi Cafeteria and public access areas outside buildings such as roadways, sidewalks and parking lots.
- 7.4.3 The use of wireless networking is not restricted in non-LANL occupied areas of LANL-leased properties such as Canyon Complex, White Rock Training Center, the Research Park and Central Park Square.
- 7.4.4 These wireless device requirements do not apply to the wireless computing capability used by Subcontractor delivery and shipping workers in the LANL receiving area outside of a building.
- 7.4.5 Active wireless devices that have prior approval to be in a PPA and/or Limited Area shall be labeled (company sticker, owner's name) to identify Subcontractor ownership.

7.5 LANL and Other Government-owned Wireless Devices

- 7.5.1 Government-owned cell or satellite phones shall be disabled when inside a Limited Area or higher Security Areas.
- 7.5.2 All LANL and government-issued cellular devices including smart phones such as Blackberries shall be turned off completely when in proximity to UCNI activity. Batteries must be removed when in proximity to classified activity.
- 7.5.3 Only LANL-issued Blackberry devices, applications and accessories may be carried in Limited Areas. No Blackberry devices are allowed in Vault Type Rooms, SCIFs or SAPFs.
- 7.5.4 Government-owned computing controlled articles (e.g. laptops, palmtop computers and PDAs) shall follow access control requirements such as username and password.
- 7.5.5 Government-owned computing controlled articles shall use anti-virus software to detect malicious activity where the capability exists.
- 7.5.6 Government-owned unclassified controlled articles are not permitted to connect to any LANL computer or network or store LANL sensitive data without approval from LANL management.

7.6 Non-government Owned Controlled PEDs

- 7.6.1 Non-government owned controlled PEDs are prohibited in Limited Areas and higher security areas.
- 7.6.2 All non-government owned cellular devices including smart phones such as Blackberries shall be turned off completely when in proximity to UCNI activity. Batteries must be removed when in proximity to classified activity.
- 7.6.3 Non-government owned controlled PEDs may not be connected to any LANL-owned information system or network (classified or unclassified) without written approval and may not be used to store any sensitive or classified government information without written approval. (Form 1897)
- 7.6.4 Non-government owned controlled PEDs shall not store or process government controlled unclassified information; unless formal approval has been granted and full disc encryption is utilized.
- 7.6.5 When privately-owned vehicles are allowed to enter a Limited Area, controlled PEDs that are attached to the vehicle (i.e. built-in cell phones, On Star and CB radios) shall be turned off if capable and left in the vehicle. Additional restrictions may apply in some areas and Subcontract workers shall follow local controls.

7.7 Non-government Wireless Computing Devices

- 7.7.1 LANL management approval may be required before bringing a non-government computing device (e.g. laptop, Tablet computer, iPhones, iPad) into a Property Protection Area based on local security requirements. *(Form 1897)*
- 7.7.2 LANL Cyber Information Security Office approval is required if computing devices will be in a Security Area or connected to the LANL network. *(Form 1897)*
- 7.7.3 LANL management approval is required before connecting a non-government computing device to a LANL network. *(Form 1897)*
- 7.7.4 Non-government owned wireless computing devices shall be authorized prior to connecting to any LANL wireless computing resource.

7.8 Connecting to Presentation Systems and Using Equipment Remote Controls Not Applicable**G8.0 Contacts (Mar 2017)**

Name	Telephone	Email
ADSS After-hours On-call Officer cell phone	505-699-4094	
ADSS After-hours On-call Duty Officer pager	505-949-0156	
Badge Office	505-667-6901	badoe@lanl.gov
Chief Information Office (CIO)	505-606-2263	
Chief Information Office on-call pager	505-664-6282	
Classification Group	505-667-5011	
Classified Matter Protection & Control	505-665-1802	cmppc@lanl.gov
Clearance Processing	505-667-7253	clearance@lanl.gov
Counterintelligence Program	505-665-6090	
(Cyber) Information Security Help Desk	505-665-1795	cybersecurity@lanl.gov
Emergency Management & Response	505-667-6211	
Fire, Bomb Threat, etc.	911	
Foreign Ownership Control & Influence	505-665-1624	
Foreign Visits and Assignments	505-665-1572	
Fraud, Waste and Abuse	505-665-6159	
Immigration Services	505-667-8650	
Info Security Operations Center (ISOC) Coordinator Pager	505-949-4762	
Lock Shop	505-667-4911	
Material Control & Accountability Group	505-667-5886	
Network Operations Center (NOC)	505-667-7423	noc@lanl.gov
Personnel Security	505-665-6565	
Physical Security Team	505-667-2510	
Protective Force	505-667-4437	
Protective Force After Hours Reporting (Central Alarm Station)	505-665-7708	
Protective Force After Hours Shift Commander	505-665-1279	
Safety Help Desk	505-665-7233	
Security Help Desk	505-665-2002	security@lanl.gov
Security Incident Team (SIT)	505-665-3505	
Wireless Point of Contact		wirelesssecurity@lanl.gov

G9.0 Required Notifications (May 2015)

SUBCONTRACTOR shall notify the Requester, STR/AdSTR and the Contract Administrator /Procurement Specialist immediately, whenever a change in the scope of the work to be performed has been identified or requested. The Requester or STR/AdSTR shall then notify the appropriate security expert so that any security modifications can be made to the approved Exhibit G in response to the change in the scope of work.

G10.0 Additional Requirements (Mar 2017)

Attachment G1

**EXHIBIT G PHYSICAL SECURITY
SECURITY REQUIREMENTS**

P.R. No. 574468

Ex. G dated: 6/22/18

REQUIRED REVIEWS AND APPROVALS


Reviewed By: D. Johnson 211478		6/22/18
_____ Name of DSO or SPL	_____ Signature	_____ Date

EXHIBIT "H"

QUALITY ASSURANCE REQUIREMENTS

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QC-01B QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR ONSITE SUBCONTRACTS (Feb 2018)

All work activities, including the purchase and inspection of any provided items intended for permanent installation (or spares), items ultimately intended for off-site shipment such as waste containers etc., or calibrated portable Measuring & Test Equipment (M&TE) being used in testing/calibration of permanently installed equipment, will be governed by the following sub-clauses that are marked with an "X":

- ☒ The LANL Quality Assurance (QA) Program governs the subject work. All applicable items must be procured by LANL through the LANL procurement process and be receipt inspected by LANL QPA Division with an associated Inspection Plan (i.e. Form 1952) prepared by LANL project personnel, unless an approved LANL Compensatory Action Plan and/or Commercial Grade Dedication (CGD) package allows otherwise.

Unless otherwise provided for in this subcontract, SUBCONTRACTOR is responsible for including (i.e. flowing down) the quality assurance requirements of this subcontract in its lower-tier subcontracts to the extent necessary to ensure SUBCONTRACTOR'S compliance with these requirements.

QC-02 DESIGN/CHANGE CONTROL FOR SUBCONTRACTOR PROVIDED DESIGN (May 2008)

SUBCONTRACTOR shall provide a design that is defined, controlled, and verified. Applicable design inputs shall be appropriately specified on a timely basis and correctly translated into design documents. Design interfaces shall be identified and controlled. Persons other than those who designed the item shall verify design adequacy and accuracy. Design changes shall be governed by controlled measures commensurate with those applied to the original design.

QC-03 QUALIFICATION AND CERTIFICATION OF PERSONNEL AND STAFF (Sept 2014)

SUBCONTRACTOR'S personnel and staff shall have the indoctrination, training, experience, qualifications and certifications necessary for the work to be performed as required by industry standards, as well as any additional requirements specified in this subcontract. Qualification and certification records shall be available for review by CONTRACTOR upon request.

QC-06 CERTIFICATE OF CONFORMANCE (Feb 2018)

SUBCONTRACTOR shall provide a Certificate of Conformance (C of C) for all items or services procured through this subcontract. Each C of C shall be from SUBCONTRACTOR and/or Manufacturer, shall identify CONTRACTOR'S subcontract number, and state that the item or service described thereon conforms in all respects with subcontract/manufacturer requirements, which may include any applicable specifications, drawings, marking requirements, part/model/serial number identification, or codes/standards that the item is certified to. Where applicable, the C of C shall identify the material by CONTRACTOR'S part/control number consistent with part number information in subcontract documents and/or CONTRACTOR'S specifications. Each C of C shall further identify any approved changes, waivers, or deviations to the item requirements and identify any requirements that have not been met, with a corresponding means/recommendation for resolving the nonconformance. Each C of C shall be signed or otherwise authenticated by an authorized person responsible for this function as described in SUBCONTRACTOR'S quality assurance program (or other representative of SUBCONTRACTOR and/or manufacturer if SUBCONTRACTOR is not required to have a quality assurance program). SUBCONTRACTOR personnel must assure that certificates of conformance are verified for compliance with the technical and quality requirements stated in the subcontract.

QC-07 MANUFACTURING, INSPECTION, MAINTENANCE, REPAIR, AND/OR TEST PROCEDURES (Sept 2014)

SUBCONTRACTOR shall upon CONTRACTOR'S request, submit to CONTRACTOR for review prior to manufacturing, inspection, maintenance, repair and/or testing, written procedures, checklists, and/or travelers detailing the activity that will be performed to verify that the items being supplied or worked on conform to the requirements of this subcontract.

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QC-08 INSPECTION, EXAMINATION, AND TEST REPORTS (Mar 2016)

SUBCONTRACTOR shall provide to CONTRACTOR, with or prior to each shipment, or as the result of on-site testing/inspection, all reports of inspections and/or tests performed on the items procured/inspected/tested. The reports shall be traceable to the subcontract number, item part/model number, item serial number (where applicable), and/or system description (when items are tested/inspected as part of an overall integrated system).

QC-17 MANUALS / INSTRUCTIONS (Jun 2011)

SUBCONTRACTOR shall submit manuals/instructions or other documents that identify the items provided and include as applicable, drawings/sketches, part/model numbers (including recommended spare and replacement parts and data required for ordering), storage guidelines, safety precautions, installation/test instructions, and operating and maintenance instructions. The manual/instructions shall be written in clear, concise language readily understandable by a technician or craftsman, and shall conform to the industry standards that prevail for the preparation of such documents.

QC-22 CONTRACTOR'S RIGHT OF ACCESS TO SUBCONTRACTOR'S FACILITY (Visit) (Jun 2011)

CONTRACTOR reserves the right to send its representatives to visit SUBCONTRACTOR'S facilities, on a non-resident basis, for surveillance and survey/audit purposes, to assure/verify SUBCONTRACTOR'S conformance to the technical requirements of this subcontract, including test and inspection requirements, and all applicable quality assurance requirements. Such personnel shall be allowed full access to: (1) witness all operations/tests involved in the performance of this subcontract; and (2) survey/audit all records pertaining to the subcontract. Reasonable advance notice (minimum 24 hours), in writing, will be provided to SUBCONTRACTOR prior to any such visits. SUBCONTRACTOR shall flow down this requirement for CONTRACTOR'S right of access to all lower-tier subcontractors and suppliers.

QC-23 CONTRACTOR'S RIGHT OF ACCESS TO SUBCONTRACTOR'S FACILITY (Resident) (May 2008)

CONTRACTOR, at its discretion, may assign and station resident representatives at SUBCONTRACTOR'S facility to provide program coordination. These representatives will assist in expediting actions between CONTRACTOR and SUBCONTRACTOR, maintain program surveillance, and evaluate program progress. The resident representatives shall have access to all areas and all information directly related to the scope of their responsibilities hereunder. SUBCONTRACTOR agrees to provide appropriate office space, office supplies, secretarial services, and communication facilities for such representatives at no additional cost to CONTRACTOR.

QC-24 DESIGN REVIEW PRIOR TO PRODUCTION (Sept 2011)

Unless waived in writing by CONTRACTOR, before release of the design documents, SUBCONTRACTOR shall provide for one or more design reviews by CONTRACTOR and shall obtain written approval/authorization from CONTRACTOR to finalize design and/or begin production/fabrication/construction. To facilitate the design review, SUBCONTRACTOR shall notify CONTRACTOR of its readiness for a design review conference at least five (5) working days before the date on which the conference is scheduled. The notification shall include the proposed conference agenda and one reproducible copy of each document that constitutes the design or helps to demonstrate that the design meets CONTRACTOR'S requirements.

QC-25 NONCONFORMANCE REPORTING (Feb 2018)

SUBCONTRACTOR shall evaluate and notify CONTRACTOR of each nonconformance against items and services that do not meet procurement document requirements within three (3) working days of discovery. This includes, but is not limited to, nonconformance with documentation requirements and technical or material requirements, including situations where an item may be restored so as to function unimpaired, but it does not meet the original subcontract/design requirement. Notice of a

nonconformance shall consist of a written description of the nonconformance and when available, an assessment of the cause and the proposed disposition/corrective action, including technical justifications for any proposed Use-As-Is or Repair dispositions. In cases where the SUBCONTRACTOR proposes a Use-As-Is or Repair disposition, the disposition of the nonconformance will be approved by CONTRACTOR with corresponding disposition implementation verified. Such Use-As-Is or Repair nonconformance documentation will be supplied by SUBCONTRACTOR to CONTRACTOR via LANL Form 2178, *Conduct of Engineering Subcontractor Deviation Disposition Request (SDDR)* or other formal/controlled method and all records of nonconformance shall be maintained by the SUBCONTRACTOR. SUBCONTRACTOR shall allow for the return of any materials determined by CONTRACTOR to be nonconforming as a result of CONTRACTOR'S receipt inspection.

QC-26 CORRECTIVE ACTION REPORTS (Jun 2011)

SUBCONTRACTOR shall provide a written acknowledgement within five (5) working days of receipt of a request for corrective action from CONTRACTOR. SUBCONTRACTOR shall respond in writing within 30 days, with actual corrective actions taken or planned. Prior to implementation, such actions will be evaluated and approved by CONTRACTOR to ensure corrective actions have been/will be effectively implemented.

QC-27 SUSPECT/COUNTERFEIT ITEMS (S/CI) (Feb 2018)

- (a) A suspect item is one in which there is an indication by visual inspection, testing, or other information that it may not conform to established Government or industry-accepted specifications or national consensus standards. A counterfeit item is a suspect item that is a copy or substitute, without legal right or authority to do so, or one whose material, performance, or characteristics are knowingly misrepresented by the vendor, supplier, distributor, or manufacturer.
- (b) SUBCONTRACTOR warrants that all items, including their subassemblies, components, and parts, tendered to CONTRACTOR shall be genuine (i.e., not counterfeit), new and unused, and conform to the requirements of this subcontract, without substitution unless otherwise provided for within this subcontract or approved in writing by CONTRACTOR prior to delivery.
 - (1) SUBCONTRACTOR shall ensure (as applicable) that malicious software (and hardware) is prevented from entering into their supply chain for items/services to be provided to CONTRACTOR.
- (c) SUBCONTRACTOR further warrants that all components, parts, materials, and supplies incorporated into CONTRACTOR'S facilities or equipment by SUBCONTRACTOR, during performance of work at LANL, shall be genuine, new and unused, and original-equipment-manufacturer items, without substitution unless otherwise provided for within this subcontract or approved by CONTRACTOR in writing as suitable for the intended purpose prior to use.
 - (1) If SUBCONTRACTOR discovers any S/CI items or S/CI conditions of concern for items in use (including SUBCONTRACTOR owned items) or in the process of being installed at LANL, SUBCONTRACTOR shall temporarily segregate/control the items and immediately notify CONTRACTOR. CONTRACTOR will make subsequent notifications concerning CONTRACTOR owned items in accordance with CONTRACTOR'S S/CI procedures and provide SUBCONTRACTOR direction as to S/CI disposition. For SUBCONTRACTOR owned items with S/CI concerns (e.g. tools, scaffolding, hoisting, lifting, and rigging equipment, etc.), CONTRACTOR will provide direction to SUBCONTRACTOR up to and including the removal of such items from the LANL site.
- (d) As part of the foregoing warranties, SUBCONTRACTOR also certifies that all labels and/or trademarks or logos affixed, or designed to be affixed; to items supplied or delivered to CONTRACTOR, and to certifications, affirmations, information, or documentation related to the authenticity and quality of items supplied or delivered to CONTRACTOR under this subcontract, are genuine.

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- (e) Falsification of information or documentation may constitute criminal conduct; accordingly, SUBCONTRACTOR grants CONTRACTOR the right to temporarily segregate items, and related paperwork, that are suspected to be S/CI, pending a determination by National Nuclear Security Administration (NNSA) or Department of Energy (DOE) officials whether the segregated items should be impounded as evidence.
- (1) In the event NNSA/DOE directs CONTRACTOR to impound the segregated items, no liability shall be asserted or enforceable against CONTRACTOR, NNSA, or DOE because of the impoundment, all such liability being expressly waived by SUBCONTRACTOR or any person claiming any right or interest under this subcontract in the impounded items.
- (2) CONTRACTOR shall incur no liability for failure to return impounded items to SUBCONTRACTOR and does not assume any liability for loss or damage to the items impounded or temporarily segregated pursuant to this clause regardless of the circumstances under which said loss or damage may have occurred, and whether the impounded or temporarily segregated items are in CONTRACTOR'S possession or under its control.
- (f) Nothing in this clause shall limit CONTRACTOR'S right to reject S/CI, and related paperwork, as nonconforming, to deny payment for such items, to return such items to SUBCONTRACTOR once NNSA/DOE has released the items, or to assert other remedies provided under this subcontract or by law.

QC-29 HANDLING, RECEIVING, STORAGE, SHIPPING, AND PACKAGING (Mar 2016)

SUBCONTRACTOR shall control the handling, receiving, storage, cleaning, packaging, shipping, and preservation of items to prevent damage or loss and to minimize deterioration. Such activities shall include as applicable, the appropriate controls for items categorized as Level A, B, C, or D per ASME NQA-1 2008/2009a, Part II, Subpart 2.2. This includes items being provided by SUBCONTRACTOR to CONTRACTOR as well as any items being provided by CONTRACTOR to SUBCONTRACTOR. Handling, storage, and shipping of items shall be conducted in accordance with established work and inspection instructions, drawings, specifications, shipment instructions, or other pertinent documents or procedures specified for use in conducting the activity. Items shall be packaged according to size, manufacturer, dimensional and manufacturer lot or heat number. Packages shall be closed and labeled in a manner that identifies the item, dimensions and weight (where applicable), SUBCONTRACTOR'S and/or manufacturer's name, and CONTRACTOR'S subcontract number. Non-conforming packages may be returned to SUBCONTRACTOR at SUBCONTRACTOR'S expense.

QC-34 DOCUMENTS AND RECORDS (May 2012)

Any documents and records required to be submitted by SUBCONTRACTOR to CONTRACTOR are identified in this subcontract, including any dates/times for submittal. SUBCONTRACTOR shall retain records resulting from subcontract performance for seven (7) years from final payment, unless otherwise specified by applicable law. Disposition of Subcontractor maintained records after the specified retention times are at the discretion of the SUBCONTRACTOR.

QC-36 SOFTWARE QUALITY ASSURANCE (SQA) (Sept 2014)

SUBCONTRACTOR shall take all necessary precautions to ensure that malicious software is prevented from entering into their supply chain for items/services to be provided to CONTRACTOR. SUBCONTRACTOR shall maintain records for all computer software which will identify and state the software engineering activities used to manage the software life cycle activities (based upon a consensus SQA standard; e.g. ASME NQA-1, ISO/IEC/IEEE 12207 or equivalent Contractor specific standard) required for the purchased software items/products or services, and these records shall be made available for CONTRACTOR'S review upon request. The software life cycle activities will be identified,

Dated 7/12/18

testable, and controlled, including: requirements, design, user implementation, acceptance testing, verification, validation, problem reporting, corrective action, software configuration management, and in-use testing processes used for the software item/products or services to be purchased.

QC-37 OTHER

SUBCONTRACTOR will have a Quality Assurance (QA) Program that meets the 10 Quality Criteria of DOE Order 414.1D (an ISO 9001 certified program will meet this intent; see the following summary of the 10 Quality Criteria). A current copy of ISO 9001 Certification (or other documentation indicating implementation of a QA Program meeting DOE Order 414.1D requirements) will be provided to CONTRACTOR prior to award/start of work. Quality clause QC-01B of this Exhibit H only applies to the Subcontractor for on-site installation and/or testing work at LANL.

The SUBCONTRACTOR'S Quality Assurance Program (QAP) must address to the extent necessary, the following management, performance, and assessment criteria (ref. DOE Order 414.1D):

- (a) Management/Criterion 1 - Program.** (1) Establish an organizational structure, functional responsibilities, levels of authority, and interfaces for those managing, performing, and assessing the work. (2) Establish management processes, including planning, scheduling, and providing resources for the work.
- (b) Management/Criterion 2 - Personnel Training and Qualification.** (1) Train and qualify personnel to be capable of performing their assigned work. (2) Provide continuing training to personnel to maintain their job proficiency.
- (c) Management/Criterion 3 - Quality Improvement.** (1) Establish and implement processes to detect and prevent quality problems. (2) Identify, control, and correct items, services, and processes that do not meet established requirements. (3) Identify the causes of problems and include prevention of recurrence as a part of corrective action planning. (4) Review item characteristics, process implementation, and other quality-related information to identify items, services, and processes needing improvement.
- (d) Management/Criterion 4 - Documents and Records.** (1) Prepare, review, approve, issue, use, and revise documents to prescribe processes, specify requirements, or establish design. (2) Specify, prepare, review, approve, and maintain records.
- (e) Performance/Criterion 5 - Work Processes.** (1) Perform work consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means. (2) Identify and control items to ensure proper use. (3) Maintain items to prevent damage, loss, or deterioration. (4) Calibrate and maintain equipment used for process monitoring or data collection.
- (f) Performance/Criterion 6 - Design.** (1) Design items and processes using sound engineering/scientific principles and appropriate standards. (2) Incorporate applicable requirements and design bases in design work and design changes. (3) Identify and control design interfaces. (4) Verify or validate the adequacy of design products using individuals or groups other than those who performed the work. (5) Verify/validate work before approval and implementation of the design.
- (g) Performance/Criterion 7 - Procurement.** (1) Procure items and services that meet established requirements and perform as specified. (2) Evaluate and select prospective suppliers on the basis of specified criteria. (3) Establish and implement processes to ensure that approved suppliers continue to provide acceptable items and services.
- (h) Performance/Criterion 8 - Inspection and Acceptance Testing.** (1) Inspect and test specified items, services, and processes using established acceptance and performance criteria. (2) Calibrate and maintain equipment used for inspections and tests.

Dated 7/12/18

(i) Assessment/Criterion 9 - Management Assessment. (1) Ensure that managers assess their management processes and identify and correct problems that hinder the organization from achieving its objectives.

(j) Assessment/Criterion 10 - Independent Assessment. (1) Plan and conduct independent assessments to measure item and service quality, to measure the adequacy of work performance and to promote improvement. (2) Establish sufficient authority and freedom from line management for independent assessment teams. (3) Ensure persons who perform independent assessments are technically qualified and knowledgeable in the areas to be assessed.